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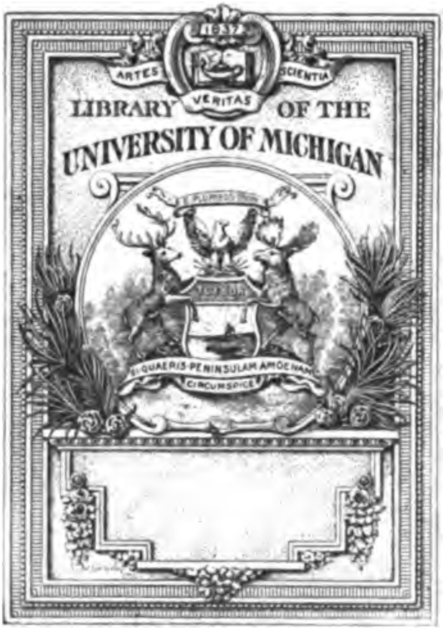
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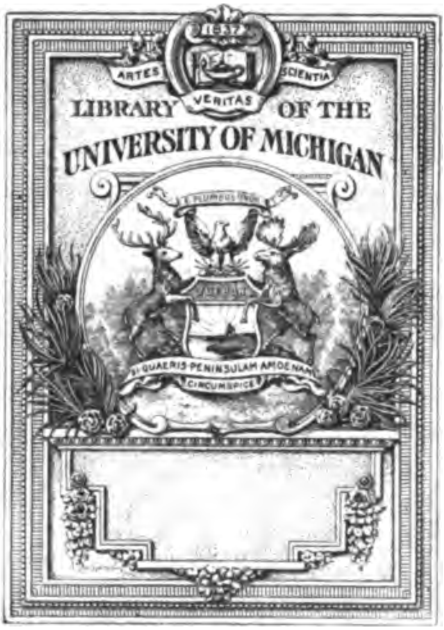
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REPORT OF THE SECRETARY OF WAR.

REPORT OF THE SECRETARY OF WAR.

WAR DEPARTMENT,
Washington, D. C., December 11, 1913.

To the PRESIDENT:

SIR: I have the honor to submit the following report of operations of this department during the past year:

During recent years the duties imposed upon the War Department have been appreciably increased by the addition thereto of administrative supervision and control in matters relating to our so-called "insular possessions" and to the construction of the Panama Canal. The scope and extent of War Department activities as thus enlarged and broadened make it physically impossible for anyone within a few months' time to get much more than a bird's-eye view of affairs, and while early impressions may prove to be fundamentally sound and correct, I have felt it prudent to limit my first report largely to matters of most pressing moment and concerning which previous discussion has cleared the air and brought about a substantial consensus of opinion, or at least crystallized it into definite forms.

During the brief period that I have been Secretary of War I have visited nearly every post within the continental limits of the United States, and the Canal Zone, and by these visits and by conversations with officers, enlisted men, and others have acquired information and impressions which I am weighing and correlating as rapidly as practicable with the pressure of current business, and I shall endeavor from time to time to give effect to the final conclusions thus reached when, and so far as, occasion calls for it and circumstances permit.

While the War Department functions through Army instrumentalities in practically all of its operations and activities, I shall divide my report for convenience of consideration into four general heads—"The Army," "Insular Affairs," "Panama Canal," and "Civil affairs."

THE ARMY.

The act of February 2, 1901, limits the President's authority to a total enlisted force in the Army of not exceeding 100,000 men at any one time, including the Philippine Scouts.[1] Within this statutory limit the authorized enlisted strength of the Army is fixed from time to time, as needs may vary, by Executive order.

Authorized strength.

On July 1, 1913, the authorized strength of the Regular Army was 4,763 officers[2] and 84,810 enlisted men,[3] a decrease of 49 officers and an increase of 3,401 enlisted men over the preceding year. In addition the authorized strength of the Philippine Scouts was 180 officers and 5,732 enlisted men, the same as during the preceding year.

Actual strength and distribution.

On June 30, 1913, the actual strength of the Regular Army was 79,986—4,665 officers[2] and 75,321 enlisted men.[4] This was an increase since June 30, 1912, of 195 officers and a decrease of 2,514 enlisted men. In addition to this, the actual strength of the Philippine Scouts on June 30, 1913, was 180 officers and 5,403 enlisted men, a decrease during the year of 77 enlisted men, the number of officers remaining the same as last year. On that date the Army, including the Philippine Scouts, was distributed geographically as follows:

	Officers.	Enlisted men.	Total.
In the United States	3,680	54,626	58,306
In Alaska	53	1,052	1,105
In the Philippines:			
Regular Army	446	10,297	10,743
Philippine Scouts	180	5,403	5,583
In China	41	1,166	1,207
In Porto Rico	33	585	618
In Hawaii	271	6,418	6,689
In the Isthmian Canal Zone	51	835	886
Troops en route and officers at other foreign stations	90	342	432
Total	4,845	80,724	85,569

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[1] The authorized number of commissioned officers is fixed by statute.

[2] Including 103 first lieutenants of Medical Reserve Corps on active duty.

[3] By General Orders, No. 19, 1913, and other minor changes. These figures include the 403 quartermaster sergeants of the Quartermaster Corps authorized by law, but do not include the authorized enlisted strength of the Quartermaster Corps (6,000) nor of the Hospital Corps (3,500), which under the law are not to be counted as a part of the enlisted strength of the Army.

[4] Not including 3,417 enlisted men of the Hospital Corps and 3,047 enlisted men of the Quartermaster Corps.

Comparison of authorized and actual strength.

The following table shows the authorized and the actual strength of the military establishment on June 30, 1913, and June 30, 1912 (not including the Hospital Corps and including only quartermaster sergeants of the enlisted strength of the Quartermaster Corps), together with the increases and decreases during the year and the number of vacancies on each of those dates:

	Regular Army.			Philippine Scouts.			Total.		
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.
Authorized strength:									
June 30, 1913	4,763	84,810	89,573	180	5,732	5,912	4,943	90,542	95,485
June 30, 1912	4,812	81,409	86,221	180	5,732	5,912	4,992	87,141	92,133
Increase during year	[1] 49	3,401	3,352	......	......	......	[1] 49	3,401	3,352
Actual strength:									
June 30, 1913	4,665	75,321	79,986	180	5,403	5,583	4,845	80,724	85,569
June 30, 1912	4,470	77,835	82,305	180	5,480	5,660	4,650	83,315	87,965
Decrease during year	[2] 195	2,514	2,319	......	77	77	[2] 195	2,591	2,396
Vacancies:									
June 30, 1913	98	[3] 9,489	[3] 9,587	......	329	329	98	[3] 9,818	[3] 9,916
June 30, 1912	342	3,574	3,916	......	252	252	342	3,826	4,168

[1] Decrease. [2] Increase. [3] Includes allowance for unassigned recruits.

Vacancies.

It appears from the foregoing figures that on June 30, 1913, there were 9,489 vacancies in the enlisted strength of the Regular Army. The authorized enlisted strength, however, includes an allowance of not to exceed 4,770 men to provide for an accumulation of unassigned recruits in case all the organizations should be filled at any time to their authorized strength. Making allowance for this emergency provision, the number of vacancies in the authorized enlisted strength of the Regular Army was approximately 4,700, in addition to the 329 vacancies in the Philippine Scouts. There were also 98 vacancies in the authorized strength of officers of the Regular Army.

OFFICERS.

Of the 4,665 commissioned officers on the active list of the Regular Army on June 30, 1913, 1,227 (including 66 chaplains) were general officers or officers of the staff corps and departments, and 3,438 belonged to the line.

One thousand and sixty-five general and staff officers and 2,617 line officers were present for duty, and 162 general and staff officers (13.20 per cent) and 821 line officers (23.88 per cent) were absent from their commands. At the close of the preceding fiscal year 10.10 per cent of the general and staff officers and 27.01 per cent of the line officers were so absent.

Detached.

Of the 983 officers who were absent from their commands on June 30, 1913, 750 were on detached service. Of the officers on detached duty 647, or all but 103, were line officers, and 512 of the 647—about 79 per cent—were captains or lieutenants, as compared with 83.1 per cent the preceding fiscal year.

New officers.

During the fiscal year ended June 30, 1913, and from the close of that year to the present time, 327 second lieutenants have been appointed in the Army—187 from the United States Military Academy, 28 from among the enlisted men of the Army, and 112 from civil life. These appointments leave only 2 vacancies of second lieutenancies in the line of the Army, both in the Coast Artillery Corps.

Retired.

During the fiscal year ended June 30, 1913, 73 officers were placed on the retired list, 10 more than were retired during the preceding fiscal year. The total number on the retired list on June 30, 1913, was 1,030, as compared with 1,017 at the corresponding date the previous year. Of the number retired during the fiscal year 1913, 30 were retired for disability; 22 on their own application; 16 by operation of law, having reached the age limit; 3 by authority of law, having reached 62 years of age; and 2 under special acts of Congress.

Under the act of Congress authorizing the Secretary of War to detail retired officers, with their consent, to certain specified duties, 100 retired officers were under assignment to duty at the close of the fiscal year—1 less than at the close of the preceding fiscal year. Of this number 38 were on recruiting service; 30 were instructors at educational institutions; 22 were detailed with the State militia; 3 were on duty as officers of the Soldiers' Home, Washington, D. C.; 2 on duty as military attachés; 1 at the Army Service Schools, Fort Leavenworth, Kans.; 1 at the Army War College; 1 in charge of Indian prisoners; 1 on duty as a member of the Cavalry Board; and 1 as doorkeeper to the President.

ENLISTED MEN.

The actual enlisted strength of the entire military establishment on June 30, 1913, was about 11.2 per cent below its authorized strength, as compared with 4.5 per cent on June 30, 1912. Of the 127,827 applicants for enlistment and reenlistment only about 20 per cent were accepted, a smaller percentage than during the preceding year, and indicating a continued maintenance of the existing standards of care of selection.

Desertions.

There was an increase of desertions from the Army during the past year, the number aggregating 4,451, which is 4.15 per cent of the whole number of enlistment contracts in force during the year. This percentage, though larger than the percentage for the three preceding years, is yet smaller than the percentage for any other year since 1901.

The regiments serving in the United States that had the least percentages of desertions were the Tenth and Ninth Cavalry (colored) and the Fifth Infantry. The regiments with the highest percentages of desertions were the Twentieth and Twenty-first Infantry, the Second Cavalry, and the Fourth Field Artillery.

Of the white troops 4.33 per cent and of the colored troops 1.23 per cent were reported as deserters, as compared with 4.15 per cent for the whole Army.

While the cause of desertion has always been shrouded in obscurity, I am convinced that a close and sympathetic relationship between the officer and his men will surely tend to lessen it. I am personally devoting as much of my time as I possibly can to the enlisted man and all that concerns him. Under the guidance of officers who win his confidence and respect, he literally is the backbone of the Army, and if I can find the cause or causes of desertion and they are relievable or remediable, I shall surely do all that lies in my power to apply the proper remedy, as I shall at all times endeavor to impress upon the Army the importance of cultivating that fine bond between company officers and their men which is based upon mutual feelings of respect and comprehension.

MILITARY PRISON ADMINISTRATION.

In furtherance of the policy of the War Department to separate, so far as practicable, general prisoners convicted of offenses punishable by penitentiary confinement from general prisoners convicted of purely military offenses, or of such offenses in connection with misdemeanors, provision has been made in General Orders 56, dated September 17, 1913, for sending to penitentiaries soldiers convicted of offenses punishable under Federal or State law by penitentiary confinement, leaving confined in military prisons only those convicted of military offenses, solely or in connection with misdemeanors.

At military prisons a system has been established whereby men under sentence for military offenses solely, whose record and conduct are such as to entitle them to the privilege, will be afforded an opportunity to receive a special course in military training during a portion of the time that would otherwise be devoted to hard labor, by enrollment in disciplinary companies and battalions under the command of officers specially selected for this duty. Those admitted to these companies are to undergo rigid military training and instruction during one-half of each working day, and hard labor during the other half. The military training is to be intensively thorough and practical, the object being to make the men efficient soldiers from the date of rejoining the service, and expert in some one particular feature of military training. Upon being enrolled in these disciplinary companies general prisoners are designated by name and not by number, and their prison garb is replaced by an appropriate uniform. It will result from these provisions that such prisoners as are restored to the colors will go back, not stigmatized as men who have worn stripes and numbers or as convicts who have done penal servitude, but as men who have been subjected to a special and rigid régime of military instruction and training, the purpose of which is to supply them with new standards of conduct and to enable them to render efficient service from the moment of rejoining. It is an essential part of the scheme that the conduct of the men so restored shall be carefully watched and reported upon after their return to the service.

The method of dealing with prisoners here outlined is an innovation in our service, though successfully in operation elsewhere. The system prescribed is to a certain extent tentative and experimental, and will be extended or its operation circumscribed in the future as experience may suggest.

MILITARY OPERATIONS.

Mexican Frontier.

At the date of the last annual report there were on duty in connection with the patrol of the Mexican border approximately 6,754 officers and enlisted men. The present strength is about the same, but largely composed of different organizations.

An extensive border patrol has been continuously maintained by these troops from the Gulf of Mexico to Sasabe, 30 miles west of Nogales, Ariz, a distance, following the windings of the frontier, of some 1,600 miles. Throughout this stretch of territory our troops have protected the border from incursions by individuals or small raiding parties from Mexico, have been continually on the alert to prevent violations of the neutrality laws, and have acted in conjunction with the civil authorities to prevent illegal importations of arms and ammunition into Mexico in violation of the President's proclamation of March 14, 1912.

In February, 1913, with the overthrow of the Madero government and the establishment of the Huerta régime, active military operations were promptly inaugurated against the same by the so-called constitutionalists, under Carranza and others. This led to a series of contests for the possession of the border towns, some of which resulted in fighting on the international boundary line. The actions at these towns along the border resulted in a number of Mexican refugees and wounded coming into our hands. The wounded were brought to the American side of the boundary and cared for in civil hospitals and by officers and enlisted men of our medical service.

The duty of our troops at border towns during the conflicts between the two contending Mexican factions was of a most trying nature, and the conduct of the troops under the circumstances, and the exercise of good judgment and self-restraint on the part of commanding officers, are highly creditable.

Gen. Bliss reports that the leaders of the contending forces—

> were notified that they must not permit shots to fall on the American side of the boundary and they invariably replied that they would try to observe this requirement. But in spite of this, many shots did fall on the American side and in the American towns and among the American troops. The troops were engaged in keeping back crowds of curious citizen sightseers as well as guarding the border to prevent the use of American territory by the contending parties. The American border towns were filled with refugees from across the line, as practically the whole population of the Mexican towns would cross to American territory until after the fight was over, and these refugees went to swell the number of curious sightseers whom our troops tried to keep out of the zone of danger.

Mobilization of second division.

Under orders issued February 21 and February 24, 1913, the three brigades of the second division with the division staff and divisional troops moved from their regular stations to Galveston and Texas City. The division headquarters is located at the latter place. The strength of the organizations involved in this movement was approximately 11,450 officers and enlisted men.

I am informed that the problem of supplying troops in the field in such a way as to relieve quartermasters with troops from detailed paper work in connection with property responsibility has been successfully worked out by the office of the Chief of the Quartermaster Corps, and that the troops of the second division in the field at Galveston and Texas City, and also the troops along the border of Texas, New Mexico, and Arizona, have been generally supplied amply and expeditiously with the stores and services necessary for their equipment and comfort, and with a minimum of paper work on the part of quartermasters in the field.

HEALTH AND SANITATION.

During the past year[1] the general health of the Army has been better than ever before, both the general admission rates and the daily average number of men sick from all causes for 1912 being less than at any time in the history of the service. Typhoid fever has practically disappeared from the Army; there has been a marked decrease in the number of venereal cases, and the occurrence of malarial fevers among troops in the United States is gradually diminishing.

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[1] The calendar year is used for all statistics in connection with health of the Army.

Typhoid fever.

Consequent upon the compulsory immunization of the Army by the typhoid prophylactic only 18 cases of typhoid occurred in 1912 in that part of the Army stationed in the United States, and 5 of these cases occurred in recruits who were infected prior to enlistment. Three deaths occurred in the United States, none of which was in the cases immunized. In the entire military establishment—the Regular Army (including the Porto Rico Regiment of Infantry) and the Philippine Scouts—there were only 27 cases with 4 deaths in 1912, as compared with 69 cases and 8 deaths in 1911, although the results for 1911 were at that time considered very remarkable.

It appears at the present time that the figures for 1913 will be even more gratifying than those for 1912, only one case, that of a recruit, having been reported in the entire military establishment. Among the large number of men in the camps at Texas City and Galveston and in the numerous camps along the Mexican border, constantly exposed to infection, not a single case has occurred. During the last few months, although several cases have been reported in the families of officers, enlisted men, and other civilians at Army posts, not a case has occurred among the military personnel.

Venereal diseases.

As a result of the propaganda of education in the Army, of compulsory prophylaxis with physical examinations, and of the stoppage of pay of men incapacitated for duty by venereal diseases, some control apparently has been secured at last over the occurrence of these diseases. The order from the War Department prescribing compulsory prophylaxis with semimonthly physical inspection was published May 31, 1912, and the act of Congress directing stoppage of pay September 12, 1912. Thus only a part of the year was affected by the two measures. However, before these orders were issued division and post commanders, upon recommendations of chief surgeons and post surgeons, had taken steps which had some beneficial results. The rates for this disease for 1912 were very satisfactory and were even better for the first six months of 1913.

Approximately one year after official action was taken by the War Department and by Congress the admission rate for venereal diseases has been reduced to less than one-half of the average annual rate for the five preceding years.

Tuberculosis.

While there is as yet no measure that can eradicate tuberculosis from the Army as the typhoid prophylactic has typhoid fever, nor control it as the venereal prophylaxis is apparently controlling venereal diseases, yet as a result of improved sanitation and of the care with which applicants for enlistment are examined the rate for tuberculosis is gradually diminishing.

Malarial fevers.

In the United States malarial fevers continue steadily to diminish, but in the Philippine Islands the admission rates for these fevers were higher in 1912 than in any year since 1906.

Alcoholism.

The rate for alcoholism in the United States for 1912 was the lowest since 1873, except that for the year 1898, which for purposes of comparison should not be taken into consideration, as it was a year of war, when such rates are usually low. The rate for American troops in the Philippines also showed a satisfactory decrease. During the year 1913 it is expected that the full benefit of the act of Congress directing stoppage of pay will be seen, and that there will be a still more marked decrease.

Improved camp sanitation.

It is being demonstrated in the camps at Texas City and Galveston that with the present system of camp sanitation troops properly protected by vaccination against smallpox and typhoid fever can live in camps suitably located for an indefinite length of time without increased mortality. Since these camps were established less sickness has occurred there than in the average post. Not a single case of typhoid fever has occurred, nor any epidemic of any infectious disease. The system of the disposal of all excreta and garbage in camps is not only very satisfactory but very simple and inexpensive.

The rate of discharge for disability for the year 1912 is the lowest since the Spanish-American War.

PRIDE IN THE ARMY AND ITS UNIFORM.

The more intimate relations which have prevailed among members of the Organized Militia and the Regular Army due to the operation of laws designed to prepare for the amalgamation and development of these two into one homogeneous body of troops in time of war have done and will continue to do much to stimulate patriotism and to disseminate among our people a better appreciation of the Regular Army and its work. - It is believed that the establishment of the military camps of instruction for students will have a tendency in the same direction.

But much remains to be done, not so much to popularize the Army as to fix it at its proper place in the estimation of the people. Not to go further back than the Spanish-American War, we have a record of efficiency in the discharge of a great variety of duties as shown in the establishment and conduct of the military governments of Cuba, Porto Rico, and the Philippines—governments whose establishment and maintenance were accompanied, among other things, by great sanitary reforms, notably in Cuba, where the work resulted in the discovery of the causes and methods of handling yellow fever, and also in the removal of this tropical scourge from Cuba, thereby rendering its elimination from the southern United States possible. Most of these duties were quite outside the scope of military duties, at least as commonly understood, and often involved the solution of complex, difficult, and intricate problems requiring a high order of intelligence and skill, a broad spirit of humanity, and the exercise of self-restraint and forbearance under most trying circumstances. It is a record of which the Army and the country are justly proud. But the results have been accomplished with so little of noise or display and with such smoothness of execution that the public largely has accepted these achievements in the same spirit that the Army itself has—as part of the day's work.

For some years the Army War College Section of the General Staff and officers generally throughout the service have been working with great earnestness, intelligence, and enthusiasm for the establishment of a definite national military policy, the spread of military knowledge among the people, and the creation of a military reserve force, to the end that there shall be in all the walks of civil life an increasingly larger number of men with a sufficient military training to make them better prepared for the service of their country should the call ever need to be made. The purpose and effect of this have not been to invite war or to encourage it, but rather to prevent or postpone it. It has been but the natural and effective operation of loyalty and patriotism on the part of those whose lives are devoted with rare singleness of mind to the national service.

As a peaceful and unmilitary people, engrossed in the settlement and upbuilding of our vast territory and in the development of the wonderful resources with which it abounds, we are but dimly impressed with the fact that just as agriculture and commerce are the foundations of our great national prosperity, so with equal truth are our military and naval forces its bulwark and defense. While I believe there is a world-wide and growing sentiment for the settlement without bloodshed of all disputes between nations, just as even now there is provision of law for such settlement of difficulties between individuals, I recognize the fact that the time has not yet come when a nation can wisely disarm or slacken its efforts for preparedness in case of war. The Army is not a luxury—it is a public necessity. A nation that is opulent, enterprising, and unarmed as of old still invites aggression, if not disaster. Speaking for that element of the national forces which comes under the control of this department, I hope to see in time of peace a growing sentiment of increased pride in our Army—as the trained and efficient organization to which we instinctively turn for help in times of great national calamity like the San Francisco earthquake, the floods of the Mississippi and Ohio Valleys, and the forest fires, and which has done such conspicuous public service in the improvement of our great waterways and the building of the Panama Canal—a pride that will make the uniform of officer and enlisted man respected always and everywhere, and not an object of curiosity or invidious discrimination.

USES OF THE ARMY IN NATIONAL CALAMITIES.

I deem it my duty to the country as well as to the Army to invite thoughtful consideration of the magnificent relief work done by the Army during the past year. A brief description of this work follows, but it only faintly pictures the character of this humane service and the promptness and effectiveness with which it was done. We are prone to think of our Regular Army in terms of war only, and not as a national first aid in calamity. Incidents such as these illustrate its power and usefulness in quite the opposite direction and tend to stimulate our pride in the Army and to bring to our minds a new sense of our obligation to the men who thus devote themselves to the national service. We are likely to forget it is *our* Army, composed of our own people and an integral part of the body politic. I fear we too often think of it carelessly, as a thing of infrequent utility, of pomp and pageantry, instead of what it really is, a tremendous silent influence for the preservation of peace and order, and an organized power of priceless value whenever its services are needed.

Floods in Ohio and Mississippi Valleys.

In the early spring of the present year disastrous floods occurring in the tributaries of the Ohio River assumed the proportions of a national calamity. Under your instructions to proceed to the flooded district for the purpose of extending the most effective cooperation of the Government in the measures necessary for the relief of the destitute and distressed sufferers, I left Washington on March 27, 1913, accompanied by Gen. Wood, the Chief of Staff; Maj. Russell, of the Signal Corps; Maj. Rhoads, of the Medical Corps; Maj. Connor, of the Corps of Engineers; Capt. Hartmann, of the Quartermaster Corps; Capt. McCoy, of the General Staff, and Mr. McEntee, from the Telegraph Division of the War Department. We first visited Cincinnati, Ohio, where we made our headquarters, and from there we went to Dayton, Hamilton, and Columbus to make arrangements for the proper organization of relief work.

From the knowledge thus gained at first hand we were enabled to issue the necessary instructions to put into effective operation at once all possible Government aid. All the resources of the War Department were brought into use, Army supplies being drawn upon in the way of tents, subsistence stores, medical and hospital and other supplies, the Engineer Department turning over a large number of steamboats, barges, and other vessels to aid in the work of relief. The work of distributing the relief was organized and carried out under the general direction of Maj. J. E. Normoyle, of the Quartermaster Corps.

I returned to Washington on April 2, 1913, and with a view to providing against similar disasters in the future, appointed a board of Army Engineer officers to investigate the flood conditions in the valley of the Ohio River and in the drainage area of Lake Erie, and to report upon the most practicable and effective measures for prevention of damage by floods to works constructed for the improvement of navigation, for the prevention of interference with interstate commerce, and of other disastrous results thereof.

The preliminary report of the board, together with an accompanying memorandum from the Chief of Engineers, is published as House Document 246, Sixty-third Congress, first session, and contains information that will be of interest and value to the localities concerned.

The board states in brief that the first requisite for the prevention of interference with interstate commerce, and, indeed, for the protection of the railroads themselves, is the exercise by the United States of control over bridges and their approaches, and is of the opinion that this control should extend to city and county bridges, of which numbers were destroyed by the flood. As under present laws the jurisdiction of the Federal Government is practically restricted to the control of bridges over navigable waters, additional legislation by Congress will be required to extend this Federal control.

While at Cincinnati we got in touch with the Army Engineer officers familiar with the previous history of the waterways of that region. Their knowledge of the situation enabled them to foresee the conditions that would ensue when the swollen tributaries should reach the Ohio River. Guided by information thus obtained, I sent telegrams to the governors of Ohio, Illinois, West Virginia, Missouri, Tennessee, Arkansas, Kentucky, Mississippi, Louisiana, and Indiana, as follows:

> I desire to inform you that in anticipation of floods in your State, in those cases where local authorities can not handle the situation and call on Federal Government for assistance, the War Department is gathering men, boats, and supplies along the river and has put Maj. J. E. Normoyle in charge in the field. His present address, City Hall, Cincinnati, care of Mayor Hunt. His aid, Maj. J. A. Logan, jr., is now at Louisville, Ky. I am sure that you will do all that is possible to cooperate, raising all the money and gathering all the supplies that you can, and I would request that you inform the department or one of the above named when and where they can get in touch with your relief agents. Normoyle and Logan are the men who so skillfully and successfully handled the flood conditions last year. As you know the widespread area to be attended makes it impossible for you or for us, or for both together, to meet all the demands as made. It is also true that when the frightened locality sends off its first appeal, it is always for much more than is needed and is very often not for things that are actually needed. In view of this may I suggest the advisability of your appointing some one responsible head to whom in your State all local appeals should be made and through whom all requests should be made on the department. This will enable us when demands are made from localities to direct them to make them in the first instance to your responsible man and he, knowing local conditions much better than we can, will send to us for what he actually needs. It is obvious that this will result in coordination, will prevent waste, and will insure much more efficient service.

Maj. Normoyle and Maj. Logan promptly established floating bases of supplies on the Ohio River from Marietta, in the east, to Cairo, where the river empties into the Mississippi. They worked in conjunction with the Navy, which had already shipped to the stricken district whole trainloads of provisions in charge of officers who rendered most efficient service. The principal field of operations for the Navy was in the Ohio Valley, but part of their personnel was utilized in the Mississippi Valley as well until cessation of the floods.

All the floating equipment of the Engineer Department—steam and motor boats, flatboats and barges—was pressed into service, and small flat-bottomed boats were hurriedly built for rescue work. The Engineer plants were the principal factors in rescue work this year, as they were during the flood of 1912 in the Mississippi Valley.

There were distributed immense quantities of food, clothing, blankets, tents, shoes, medicines, and other supplies. The work of the Medical Department was of particular value in preventing epidemics and in cooperating with local boards of health in all the States along the river, and by enforcing vaccination and other sanitary precautions they undoubtedly averted epidemics of diseases which usually follow in the wake of such disasters.

After flood conditions in the Ohio River had been brought under control, Maj. Normoyle and his organization proceeded down the Mississippi River and cooperated with the authorities there, as had been done by the Army in the preceding year.

Omaha tornado.

On the evening of Sunday, March 23, 1913, a destructive tornado swept through the city of Omaha, devastating a 5-mile path through the residential portion of the city. The buildings in a large area were razed to the ground and many people were killed and injured. The conditions thus created were beyond the resources of the local authorities and demanded energetic and immediate action by all the agencies available to rescue the injured, care for the dead, and maintain order in the stricken zone. At the request of the mayor, Maj. Carl F. Hartmann, of the Signal Corps, commandant of Fort Omaha, immediately ordered out the officers and men of his command and proceeded to the wrecked district to extend such aid as the Army could render.

The deaths from the tornado numbered about 150 people, and hundreds of others were more or less seriously injured. One thousand seven hundred houses were wrecked and damaged, 642 being a total loss. Approximately 3,300 families were rendered homeless.

At the request of the citizens' committee and the local authorities, Maj. Hartmann was placed in charge of the relief work, and promptly established a systematic scheme for the relief of the sufferers.

In recognition of the timely services, of inestimable value, thus rendered by Maj. Hartmann and the officers associated with him and the men under his command, the thanks of the city were tendered in a formal resolution, and the Commercial Club of Omaha, embracing in its membership 1,800 of the leading business and professional men, forwarded to the department a letter expressing in most cordial terms their appreciation of the services of the Army and their gratitude for the valuable assistance rendered.

Carmel Valley, Cal., fire.

Upon reports from representatives of the Pacific Improvement Co. and in response to an appeal for assistance, on July 8, 1913, troops were sent from the Presidio of Monterey to assist in the work of subduing forest fires in the Carmel Valley, Cal., which threatened the destruction of vast private interests and of the Monterey National Forest Reservation and the protective forest growth covering the headwaters of the Carmel River, the source of the water supply for the entire Monterey peninsula. By the untiring efforts of officers and enlisted men and by the most arduous labor day and night the conflagration was extinguished on July 13, within a short distance of the National Forest Reserve. The loss to private interests was comparatively small, although the fire had burned over a large area and buildings on several ranches were saved only by the timely arrival and energetic efforts of the troops.

Forest fires, Mount Tamalpais, Cal.

On July 7, 1913, in response to request for assistance, troops from the Presidio of San Francisco and from Forts Baker and Winfield Scott were sent to assist in fighting a forest fire on Mount Tamalpais, which threatened Muir Woods and seriously endangered lives and property. The troops did effective service, and the Secretary of Agriculture wrote the department expressing his appreciation of the splendid way in which the Army handled an exceedingly difficult situation.

Lower Peach Tree, Ala., cyclone.

During the spring of 1913 the Army was also called upon for duty in connection with the relief of sufferers from a cyclone at Lower Peach Tree, Ala., in which a number of people were killed and many more were injured. The Medical Department established a temporary hospital, and tents and such other supplies as were necessary were ordered for the immediate relief of the destitution and suffering that prevailed.

Forest fires, Adirondacks.

In September, 1913, the Citizens' Committee of St. Huberts, N. Y. and others requested the assistance of the Army in fighting forest fires which had been burning for three weeks in the Adirondack Mountains, and were then within 2 miles of St. Huberts. In compliance with this request a part of the Fifth Infantry was sent to the burning district and rendered valuable assistance. The conservation commission of the State of New York adopted a resolution tendering its hearty thanks to the officers and men who so materially aided in subduing the fires.

The work described above was of the greatest imaginable value, and demonstrates the preeminent usefulness of this arm of the Government in saving life and relieving distress in times of national disaster.

ARMY CAMPS FOR COLLEGE STUDENTS.

During the past summer two experimental military camps of instruction were held for students of educational institutions, one at the Gettysburg National Park, Gettysburg, Pa., and the other at the Presidio of Monterey, Cal., each camp lasting for a period of six weeks. The opportunity to participate in these camps was thrown open to all students over 17 years of age who were physically qualified and properly recommended. They were required to bear the expense of transportation to and from the camp and to pay for their subsistence and for the khaki uniform.

The instruction and military exercises were limited to the hours before noon and included the practical application of the proper precautions of health, care of the person, camping and marching, instruction in military policy and in the actual handling of troops in the field under simulated battle conditions, and in rifle shooting on the target range.

The great advantages which these camps offer to students are obvious. They obtain a healthy, active, out-of-door life for the summer vacation at a less expense than usually required when away from home and acquire habits of obedience, command, self-control, order, and personal hygiene. While the course of thorough and practical instruction involved real military work and was in no sense play, the students were afforded abundant time and opportunity for athletic sports, rest and recreation, and for gaining knowledge in the military art through which, should their country at any time stand in need of their services, they will be better fitted to discharge their duty.

The benefit of these camps to the Nation is that they foster a patriotic spirit, without which a nation soon loses its virility and falls into decay. They spread among the citizens of the country a more thorough knowledge of military history, military policy, and military needs, all necessary to the complete education of a well-equipped citizen in order that he may himself form correct opinions on military topics.

The discipline exacted was strict and just. Students were on a cadet status; that is, treated with the courtesy due prospective officers, but subject to all the rules and regulations of the camp and disciplinary measures for infractions thereof. The camp was, in fact, a training school for manly men and good citizens, with careful but not oppressive supervision and regulations, absolutely healthful surroundings, and the best of good influences.

At the Gettysburg camp 63 universities and colleges, among them most of the leading institutions of the United States (except the Pacific coast) were represented by 160 students. Similar conditions obtained at the camp at Monterey, which was attended by about 85 students from 27 educational institutions on the Pacific coast, 90 institutions in all having sent representatives.

To those who successfully finished the prescribed course of instruction at the camp certificates to that effect have been issued by the War Department, and the names of such students are on file in the records of the department.

These camps were a great success and received the indorsement of the heads of a great many colleges and universities, of the students who attended them, and of their parents, and also of the Army officers in charge, and have so demonstrated their value as a military asset that it is contemplated to hold during the vacation period of the present year four such camps, one at Burlington, Vt., one in the mountain and spring region of Virginia or a little to the south, one in the northern part of the Middle States, and one at Monterey, Cal.

The students attending the camps during the year 1913 formed an association for which they adopted the name of "The Society of the National Reserve Corps of the United States."

The department feels that it should record its appreciation of the very hearty cooperation that is being given to its plan for student military camps by distinguished educators and other public spirited citizens interested in the training and development of youth into good citizens. Among the many who are aiding the department in this great work are the following presidents of universities and colleges, who have consented to act as an advisory committee to the student organization that has been formed: J. G. Hibben, of Princeton; A. L. Lowell, of Harvard; A. T. Hadley, of Yale; G. H. Denny, of Alabama; H. B. Hutchins, of Michigan; E. W. Nichols, of Virginia Military Institute; B. I. Wheeler, of California; J. H. Finley, of the College of the City of New York; and H. S. Drinker, of Lehigh University. I can not but think that in this new enterprise we have inaugurated a great educative work that will be of reciprocal advantage to the Government and to the splendid body of young men who are responding so enthusiastically. It is extremely gratifying to know that it appeals so strongly to the judgment of men of wide experience in training young men and inspiring them with ideas of useful citizenship.

ARMY RESERVE.

Provision for the establishment of an Army reserve was made in the Army appropriation act approved August 24, 1912, and became effective November 1, 1912. The object of the law is to establish a force of trained soldiers who would in case of emergency return to active service in the Regular Army. The enlistment period is changed by this law from three to seven years, the first four to be with the colors and the last three on furlough attached to the Army reserve, without pay to reservists except in the case of war, when they receive $5 a month for the time they have been in the reserve. The reserve is to consist of soldiers furloughed to the reserve for the unexpired portions of seven-year terms of enlistment, on their own application after three years' service, or compulsorily after four years' service, unless they shall elect to be discharged with a view to immediate reenlistment for another period of seven years, or to remain with their present organization until the completion of their whole enlistment, without passing into the reserve; and soldiers who enlist or reenlist in the reserve after having been honorably discharged from the Regular Army.

Regulations for the Army reserve were published in General Orders, No. 11, dated February 11, 1913; and in General Orders, No. 26, dated April 15, 1913, instructions were issued requiring that soldiers then in service who had enlisted prior to November 1, 1912, be made fully acquainted with the provisions and purposes of the law creating the reserve, and that efforts should be made to induce such of these men as were qualified and did not intend to continue in active service to enlist for the Army reserve. Instructions were also issued that with the enlistment papers there should be forwarded to The Adjutant General's Office the applications of such recruits as desired transfer to the reserve at the end of three years' service with an organization.

The Adjutant General reports that approximately 21,000 men enlisted in the Army between November 1, 1912, and August 31, 1913, and of this number 61 made application to be furloughed to the reserve at the expiration of three years' service, and that on the date last named the reserve consisted of 8 men.

I found from a personal trip to most of the Army posts and from interviewing as many of the officers and men as I could that the men were dissatisfied with the present enlistment contract. It does not seem worth while to discuss whether their dissatisfaction is well founded or not since it exists, and if we are to build up a reserve we must devise some method of doing so. That we must build up a reserve seems to be the consensus of opinion, and I understand that Congress is favorable to a reserve. One trouble with the present law undoubtedly is that it does not offer as great financial inducement to the man who enlists so as to pass into the reserve as it does to the one who does not so enlist, particularly during the first six years of his service.

From the most careful consideration that I have been able to give this subject I have reached the conclusion that we will be able to get a reserve, if one is obtainable at all, by a provision of law that will permit the department when it is satisfied as to the proficiency of the soldier to honorably discharge him with no other obligation on his part, as far as the balance of his enlistment is concerned, except to return to the colors in case of actual war. The brevity of my allusion to this subject in this report is not because of its slight importance, the fact being that I think it of the very greatest importance, but because the details will have to be worked out after the most careful consideration by the Congress, with such aid from the department as may be called for. I have, therefore, thought it useless to take more time and space here to deal with it.

UNITED STATES MILITARY ACADEMY.

On September 1, 1912, there were 556 cadets on the rolls of the Military Academy and 74 vacancies. Due to the increase in the number of Members of the House of Representatives following the taking of the last census, the authorized strength of the corps of cadets was increased by 42. On September 1, 1913, the authorized strength of the Corps of Cadets, including those authorized under the act of April 19, 1910, permitting a cadet's successor to be admitted after the former shall have finished three years of his course, was 691. The actual strength on that date was 611, leaving 80 vacancies.

There is every reason why this splendid educational institution should be operated and maintained at its maximum capacity. The Government has made large expenditures and has buildings and accessories to meet every purpose. The excellent corps of professors and instructors, the magnificent location of the academy, and the traditions and fine atmosphere that surround West Point, all demand that its splendid facilities should be utilized to their fullest extent. In my judgment, a graduate of the academy, whether he continues in the Army or after the statutory period of service returns to civil life, becomes a national asset of increased and peculiar value because of the training he has received. We owe it to the country and to the hundreds of eager boys everywhere throughout the length and breadth of the land who are seeking, but can not get, appointments to the academy, to devise some plan that will keep these places always filled. There should be a waiting list, instead of a list of vacancies.

For the last 10 years the average annual number of vacancies at the academy has been 80. This matter has been repeatedly brought to the attention of Congress, but so far without any effective legislation. Why should not the doors of this national institution be thrown open to the widest competition in every State, so that any boy who is morally and physically qualified may take the mental examination with the condition that if no candidate from the particular congressional district in which a vacancy exists should qualify, the candidate who passed highest from some other district where there was no vacancy should receive the appointment? However, the department is not wedded to this or any other particular plan, and will welcome any method that the Congress in its wisdom may devise that will keep the quota at West Point filled to the limit with young men who are sound morally, physically, and mentally. With the wealth of material that exists it ought not to be a hopeless task to work out the problem presented.

There has been some complaint that the mental examinations for admission to West Point are unnecessarily severe, and that it is difficult, if not impossible, for a boy to qualify unless he has the means to attend a course at one of the numerous preparatory schools that make a specialty of fitting for the Military and Naval Academies. While not disposed to lower the high standards which now exist, experience has shown that there are frequent cases where the cramming process which is undergone at these preparatory schools enables a boy to pass the examination without really being sufficiently well grounded to maintain himself after admission to the academy. It is believed that a better test of a boy's capacity for the work he will be called upon to do is to be found in the educational preparation required for entrance into our collegiate institutions of the first rank. Accordingly a rule has been adopted to accept the certificate of these institutions in lieu of a mental examination. This does not interfere with the boy who has not this certificate. It simply amplifies the means of entrance.

ELIMINATION AND SELECTION.

In any concern where the managers are appointed for life and their advancement to higher positions is a mere question of time, necessarily individual initiative is absent as an incentive. This is the situation which any student of the Army finds present there. While there is a surprising amount of ambition and initiative in the Army, the fact that each man is promoted up to the grade of colonel purely by reason of causes entirely outside of his own conduct and merely by the passage of time, makes the initiative absolutely self-generated. In the earlier stages officers have the initiative natural to youth. As they grow older the deadening effect of the system becomes progressive, and in many cases the loss of initiative is apparent.

To my mind it is perfectly clear that if some plan of selection, perhaps to a limited extent, is put into effect, the added impulse will be enormous, and all of the officers of the Army will feel the result, and the effect with respect to alertness, enterprise, and vigor will be very great.

This subject is receiving a very great deal of attention, and I think it is ripe for the Congress to take up, and I hope to be able to cooperate with them in this matter.

DETAIL SYSTEM.

So far as I have been able to observe, the detail system put into effect in 1901 has worked most satisfactorily. It has been indorsed by every Secretary of War since that time. Under that system, instead of having a permanent Staff Corps, officers from the line of the Army are from time to time detailed with the result that the Staff Corps officers are so recently from the line as to know the sentiment and needs of the line, and when they go back into the line they are so recently from the staff as to be able to use the knowledge acquired therein advantageously in the line.

In my judgment we should proceed along the lines as originally laid down until this system has been fully put in operation and the law providing for it has been complied with.

MILITARY AERONAUTICS.

In February, 1913, the aviation school at Augusta, Ga., was transferred to Texas City, Tex., where the second division of the mobile army was concentrated, in order to take part in field operations and thus enable officers and troops and aviators to study and perfect the use of the aeroplane under actual field conditions. Two of the longest cross-country flights without stop ever made in this country were completed, from Texas City to San Antonio and return, a distance of 240 miles each way. On this flight a remarkable military sketch map was made by the reconnaissance officer, fairly complete in detail and showing railroads, wagon roads, towns, streams, hills woods, prairies, and other topographic features of value in military reconnaissance work.

The equipment of the army aviation service now consists of 15 aeroplanes. Contracts have been made for six additional aeroplanes, and their delivery is expected in a short time. The Army has no dirigibles of any kind.

The interest which is being taken by various countries in the development of military aeronautics is reflected in the appropriations made for that purpose, which for 1913 are as follows:

France	$7,400,000
Germany	5,000,000
Russia	5,000,000
England	3,000,000
Italy	2,100,000
Japan (approximate)	1,000,000
Mexico	400,000
United States	125,000

The total amount expended by the United States since the inception of the art is $255,000.

It has seemed wise to me this year, in view of other more urgent necessities, not to ask for any large appropriation for this service. Undoubtedly the experiments being carried on in other countries at great expense will demonstrate the most useful form of air machine, and when we are in a situation to expend money for this purpose we will also be in possession of information which will enable us to expend it with the best results.

SEACOAST FORTIFICATIONS.

The installation of heavy gun batteries for the home ports of the United States is now practically completed, with the exception of the entrance to Chesapeake Bay and at San Pedro, Cal., the port of Los Angeles, which has recently been added to the list of ports to be defended.

Fortification is progressing satisfactorily at the entrance to Manila Bay and at El Fraile and Caballo Islands.

In the Canal Zone battery construction has proceeded rapidly, and the armament will be shipped and installed as rapidly as possible.

The seacoast defenses of Oahu are now nearly finished.

The construction of barracks and quarters for officers and men in the Canal Zone and Oahu is a matter necessitating early action, in order that the troops may be sheltered. Accordingly estimates have been submitted for an appropriation to build these barracks and quarters, aggregating $1,753,600 for the Hawaiian Islands and $1,268,580 for the Canal Zone. The full plan and details are contained in a letter to the Speaker of the House, published in House Document No. 276, Sixty-third Congress, first session.

ARMY POSTS.

There are so many matters of immediate importance calling for consideration, particularly an adequate supply of field artillery and ammunition therefor, that I do not purpose making any suggestion to Congress at this session concerning the matter of new construction of Army posts. Whatever plan may hereafter be formulated with respect to the number and location of posts as a result of the study of the economical management of the Army, I think it much wiser at the present time to get along with what we now have than to ask for the necessary appropriations to build larger posts for the purpose of housing larger units of the service. With the accommodations and resources now available, I shall endeavor to so station the Army as to have not less than a regiment at a post, or so that the different units of a regiment are so close together as to make them for all practical purposes as utilizable as if stationed at one post.

GEOGRAPHICAL DIVISIONS AND DEPARTMENTS.

By general orders dated February 6, 1913, a tactical organization of the troops of the mobile Army into divisions and brigades was established, and for purposes of military administration the territory of the United States and its possessions was reorganized into six geographical commands—the Philippine Department, the Hawaiian Department, and four departments in the United States, known as the Eastern, Central, Western, and Southern Departments.

CONSOLIDATION OF SUPPLY DEPARTMENTS.

The consolidation of the former bureaus of the War Department known as the offices of the Quartermaster General, Commissary General, and Paymaster General into a single bureau known as the Quartermaster Corps, and the consolidation of the Quartermaster's, Subsistence, and Pay Departments of the Army into a single department known as the Quartermaster Corps of the Army became effective November 1, 1912, and replaced the three bureaus of the War Department and the three departments of the Army above mentioned. Since that date the duties previously performed by the three separate departments have been performed by the Quartermaster Corps, except in the Philippine Islands, where the consolidation did not become effective until January 1, 1913.

The consolidation was effected promptly and satisfactorily, and so far as known without delaying or interfering with the supply service and pay of the Army, notwithstanding the fact that approximately one-half of the 130 captains of the line detailed for duty with the Quartermaster Corps were relieved from such detail by the operation of the law requiring two years' duty with troops in each preceding six years.

An actual saving of $47,030 per annum for clerical hire in the office of the Chief, Quartermaster Corps, has followed the consolidation of the office establishments of the Quartermaster General, Commissary General, and Paymaster General.

Gen. Bell, commanding the Department of the Philippines, reports that the consolidated work of the three departments—Quartermaster's, Subsistence, and Pay—is now being done by the office force of the department quartermaster at a cost $3,650 less than the cost of operation of the single office of the department quartermaster before the consolidation.

SCIENTIFIC SHOP MANAGEMENT.

In the Ordnance Department, which is the great manufacturing branch of the Army, scientific shop management has been continued at the various arsenals with a considerable saving to the Government and with advantage to the workmen in increased pay.

At the Watertown Arsenal, where the system was first installed and where its practical operations have been further advanced than at any other arsenal in the application of the time study and premium features, the Chief of Ordnance reports the sums paid out in premiums to men engaged upon premium jobs amounted in the month of August, 1913, to an average addition of between $9 and $10 to their monthly wage. The total amount paid out in premiums during the 17 months from January 1, 1912, to May 31, 1913, at the Watertown Arsenal, was something over $22,000. This was over and above the regular wages, which were the same as those in the vicinity, no reduction having been made.

Systematic attention has also been given to the utilization of accumulations of scrap and of obsolete materials, and a satisfactory saving has resulted.

The act of Congress approved July 17, 1912, authorizing the payment of cash rewards for valuable suggestions submitted by employees has been put into operation during the year with a stimulating effect.

Continued attention has been paid to the reduction of the number of preventable accidents to employees by the installation of adequate safety devices, and to providing for the comfort and welfare of the workmen at the various arsenals.

The law enacted May 30, 1908, providing for the compensation of employees, requires absence as a result of injury of at least 15 days before compensation can be paid, after which full wage is paid for the period of disability up to one year. It is believed that this law might be improved by changing it so that payment for time lost through injury shall commence concurrently with the loss of time, and shall be less than the full wage so that there may be an incentive to return to work.

TRANSFER OF WASHINGTON-ALASKA MILITARY CABLE AND TELEGRAPH SYSTEM TO POST OFFICE DEPARTMENT.

The Washington-Alaska military cable and telegraph system begun in 1900 was constructed by the Signal Corps of the Army as a military necessity to connect the scattered posts in Alaska and to afford a direct line of telegraphic communication with Seattle for the transmission of military orders and instructions. From the first the facilities of the system were thrown open to the public, and undoubtedly this service has been of great value to the people of the Territory and has helped materially to develop its resources. With the settlement and growth in population of Alaska the use of this system for commercial business is now so preponderating as to make it a public utility rather than a military necessity, and as a consequence the War Department has requested the Post Office Department to take over the system. The matter will be laid before Congress at this session with a view to securing its consent to the proposed transfer. When this is effected 200 enlisted men and 5 officers will become available for field duty with the Signal Corps.

The system now embraces 2,635.95 miles of submarine cable, 1,047.5 miles of land lines, and 10 radio stations. The proposed transfer contemplates turning over to the Post Office Department the entire system—cables, land lines, radio stations and equipment complete, as it now stands—and relieving the Signal Corps of the Army from any further duty or responsibility for its operation and maintenance.

THE ORGANIZED MILITIA.

While there has been a small decrease in officers and enlisted men in the Organized Militia during the past year, this decrease has occurred, in great part, as the result of the elimination of organizations found hopelessly inefficient and is compensated for by an increase in general efficiency.

The introduction in a number of States of a systematic and progressive course of theoretical instruction, formulated and supervised by Regular Army officers, produced good results. In practical instruction progress has been made at the officers' camps held in many States, the results obtained confirming the opinion already held, that these camps are a valuable means of supplementing the theoretical instruction previously imparted.

It is regretted that in target practice the reports show but slight progress during the year. This fact is the more serious as rifle practice is recognized as one of the most vital elements in the training of the infantry soldier. The present tendency to develop rifle teams, composed mostly of commissioned officers, at the expense of target practice for the enlisted man is opposed to the Federal policy in this matter and should be discontinued.

The excessive cost of attendance at garrison schools, together with the inadequate results obtained, necessitated the withdrawal of authority for attendance thereat. Better results will be obtained at other service schools whose doors are open to the Organized Militia, and the appropriation which formerly was devoted almost exclusively to the former class of schools should be utilized in an increased attendance at the latter.

Measures calculated to protect the interests of the Government in Federal property issued to the Organized Militia have been introduced during the year. These measures take the form of a system of accountability that enables the States concerned to regulate the quantity of such supplies kept on hand by the demands of the organizations requiring it and which enables the Federal Government to know at all times the amount of its supplies actually in the hands of the States, and at the same time secures it against waste by improper application of the law authorizing the dropping of clothing under the provision regulating the clothing allowance.

The great expense of mounts for field artillery and cavalry interposes a serious obstacle to the provision of an adequate and efficient force in either of these arms. The only remedy lies in an increased Federal appropriation looking to the partial maintenance of a nucleus of mounts for such organizations, such mounts to be originally purchased, however, by the militia. Legislation to this effect has been proposed.

The necessity for a greater number of inspector-instructors for the Organized Militia has become so pressing that it is believed that legislation should be secured providing for an increase of officers of the Regular Army sufficient to fulfill the demands of the States for these officers. The law contemplates the detail of an inspector-instructor for each regiment or separate battalion of infantry, and the equivalent for the other branches of the service, and it is the policy of the War Department to carry this law into execution so far as practicable. At present this is impossible, as such action will require a total of 187 officers, an excess of 109 over the present number on detail.

Reluctance on the part of many States to provide sanitary organizations in their Organized Militia is regretted. Properly organized sanitary units are so important in field service and so difficult to provide within the limited time available after the need for their existence arrives that every effort should be made to provide, equip, and train these organizations in time of peace.

The national importance of a reserve system for the Organized Militia can not be questioned. The minimum strength at which militia organizations are maintained in time of peace will render necessary a great and immediate increase in a national emergency, and this fact demands the presence of a system of reserves from which trained men may be secured for this increase. Without some such system, not only will such increase be rendered exceedingly difficult, but even when accomplished the efficiency of the organizations will have been reduced to a minimum by the introduction of an untrained element double in number the trained personnel.

The cooperation of the governors of the several States having been secured, a plan for the organization of the entire Organized Militia into military divisions has been initiated. It remains now for the Organized Militia to complete their organizations, both in number and in strength, so as to render these divisions such in fact as well as in name.

The War Department has issued, during the year, instructions calling for compliance with the militia law in the matter of organization. Proper organization as required by the law is absolutely necessary if the Organized Militia is to be counted on as a dependable military Federal asset in time of national need, and the organizations existing as such in name only will be required to complete their component elements or lose Federal recognition of their character as such organizations.

THE PHILIPPINES.

Personnel.

Gov. Gen. Forbes, who had left the islands on March 15, 1912, because of ill health, reached the Philippines on his return January 8, 1913. During the absence of the Governor General the duties of that office had been performed by Vice Gov. Newton W. Gilbert.

The resignation of Gov. Forbes was accepted in the following letter:

THE WHITE HOUSE,
Washington, August 25, 1913.

MY DEAR GOV. FORBES:

I have appreciated your willingness to remain as Governor General of the Philippines until I might, with deliberation, select your successor. I realize the amount of excellent work which you have done in the islands both as secretary of commerce and police and as Governor General, and I desire to thank you for your faithful and careful service.

It is my desire that your successor should, if possible, reach the Philippine Islands before October 16, and I therefore accept your resignation to take effect September 1.

Sincerely, yours,

WOODROW WILSON.

Hon. W. CAMERON FORBES,
Governor General of the Philippine Islands, Manila, P. I.

Mr. Francis Burton Harrison, of New York, was appointed Governor General, his appointment dating from September 2, 1913, on which date he took the oath of office in the War Department. Gov. Harrison sailed for the islands on September 10.

Vice Gov. Newton W. Gilbert, secretary of public instruction, submitted his resignation in a letter dated April 18, 1913. His resignation was not at that time accepted. Shortly after the arrival of Gov. Gen. Harrison, Vice Gov. Gilbert, who had been acting governor, again submitted his resignation, and it was accepted, to take effect on the qualification of his successor. Vice Gov. Gilbert, who had been entitled to a leave of absence for some time, but had not taken it, due to the requirements of the service, availed himself of a leave of absence, and left the islands October 16.

Judge Charles B. Elliott, of Minnesota, who had been a member of the Philippine Commission and secretary of commerce and police, while on a leave of absence in the United States resigned, to take effect December 4, 1912.

Mr. Dean C. Worcester, who had been a member of the Philippine Commission from its formation and secretary of the interior of the Philippine Islands from the date of the establishment of that office, resigned, and his resignation was accepted to take effect September 15, 1913.

Mr. Gregorio Araneta, who had been a member of the Philippine Commission and secretary of finance and justice, Messrs. Jose R. de Luzuriaga, Juan Sumulong, and Frank A. Branagan, members of the commission without portfolios, submitted their resignations, which were accepted, to take effect on the qualification of their successors. Nominations of persons have now been sent in to fill all the vacancies on the commission and, as organized on the confirmation of the pending nominations, it will be composed as follows:

Governor General and president of commission, Francis Burton Harrison.

Vice Governor and secretary of public instruction and member of commission, Henderson S. Martin.

Secretary of the interior and member of the commission, Winfred T. Denison.

Secretary of commerce and police and member of commission, Clinton L. Riggs.

Members of the commission without portfolio, Jaime C. de Veyra, Rafael Palma, Vicente Ilustre, Vicente Singsong.

The year in the Philippine Islands has been one of orderly progress.

Public order.

There was during the year no incident which disturbed the peace of the Christian provinces of the Archipelago.

There was a slight disturbance in the Moro Province, apparently due to the execution of the orders of the provincial governor of September 8, 1911, directing the disarmament of the Moros and extending to the Moro Province the rules governing the islands in general as to carrying arms. This disturbance is now, it is hoped, happily ended, and on July 8, 1913, this cablegram was sent to the Governor General of the islands expressing the wishes of the department in this matter:

> I am glad to learn from dispatches that the forcible disarmament of the Moros is practically completed, and I trust that from now on the question of carrying arms may be controlled by measures similar to those in force in the northern islands.

Finances.

Though the revenues of the Government have progressively increased, the funds from this source alone have been unable to keep pace with the rapid construction of public works which have been carried on in the islands. This has been recognized by my predecessors, who have recommended to Congress the granting of authority to increase the limit of indebtedness of the Philippine Government for public works from $5,000,000, as now authorized by law, to $15,000,000. The plan of public works which has been pursued in the Philippine Islands has contemplated this grant of authority and the receipt of funds as a consequence thereof. Very largely as a result of this, the available cash balance for general purposes in the Philippine treasury was at the end of the fiscal year 1913 somewhat lower than it has been in any year since 1905, this notwithstanding the fact that during the past few years there had been expended for public works the proceeds of a $5,000,000 loan and that a considerable surplus of the gold-standard fund had been made available for general purposes by an act of the Philippine Legislature.

The new Governor General is confronted with the necessity of adopting one of these courses: Either of continuing the recommendation of his predecessor for authority to issue bonds, or materially curtailing the expenses of the government, or increasing taxation. The urgency of one of these steps is the greater because of the fact, as will appear in the discussion of the effect of the new tariff, that the Philippine Government is deprived of a source of revenue averaging approximately $1,000,000 a year by the abolition under that act of export taxes in the Philippine Islands.

The foreign trade of the Philippines for the past fiscal year reached a total of $110,000,000, being an increase of a little over $5,000,000 from the total of the preceding year. Of the imports amounting to $56,000,000, 45.1 per cent were from the United States as compared with 37.8 per cent of the totals for the preceding year. Of the total exports of $53,307,251, 37.1 per cent were shipped to the United

States as compared to 42.8 per cent in the preceding year. The loss was due entirely to sugar, 87 per cent of which was shipped to the United States in 1912, and 42 per cent only in the fiscal year 1913. Reports from the islands indicate that there will be large production of all of the principal crops in the current fiscal year.

Tariff changes.

In the tariff act which was approved October 3, 1913, the provisions of the act of August 5, 1909, governing trade relations between the United States and the Philippines were amended in the following respects:

First. The provision limiting the number of cigars and other forms of tobacco which might enter the United States from the Philippine Islands free of duty was stricken out.

Second. The provision limiting the amount of sugar which might be admitted free of duty from the Philippine Islands was stricken out.

Third. The provision requiring rice shipped to the Philippine Islands from the United States, or to the United States from the Philippine Islands to pay the same duty imposed upon rice shipped from foreign countries into the Philippine Islands or the United States, respectively, was stricken out.

Fourth. Section 13 of "An act to raise revenue for the Philippine Islands and for other purposes," approved August 5, 1909, was repealed. This was the section imposing export tax, so that all export taxes in the Philippine Islands were abolished. All of these modifications are intended to give more liberal treatment to the products of the Philippine Islands.

Under the law of 1909, the export tax on hemp amounted to about $1,500,000 annually. It is fair to assume that this tax ultimately fell upon the producer. So much of this as represented exports shipped directly to the United States for consumption therein was remitted, in consequence of which the insular treasury received but $1,000,000 of the tax, the remaining $500,000 representing a differential in favor of American importers. The abolition of this tax, therefore, though depriving the treasury of considerable annual revenue and American hemp importers of the substantial advantage they formerly enjoyed, should, nevertheless, remove a considerable burden from the hemp producer. Briefly, the effect of this should be to relieve the Philippine producer of a tax of about $1,500,000 a year by decreasing the revenues of that government approximately $1,000,000.

Relations of houses of legislature.

The regular session of the legislature adjourned February 3, 1913, for the third successive year without having passed the annual appropriation bill for the support of the Government. The legislature was called into extra session by the Governor General, convening on February 6, 1913, and adjourning on February 12, but did not during the extra session pass the appropriation bill.

Section 7 of the organic act of July 1, 1902, provides, among other things—

> That if at the termination of any session the appropriations necessary for the support of the Government shall not have been made, an amount equal to the sums appropriated in the last appropriation bills for such purposes shall be deemed to be appropriated; and until the legislature shall act in such behalf the treasurer may, with the advice of the Governor, make the payments necessary for the purposes aforesaid.

For the third successive year it became necessary to take action under this provision, so that the executive authority performed what is ordinarily the most important duty of the legislature; that is, to provide annual appropriation bills.

This continuous disagreement between the two houses on the most important matters committed to the legislature is not indicative of a healthful condition. The remedy can only be arrived at after detailed and accurate knowledge of the causes is ascertained.

Slavery agitation.

The Senate on May 1, 1913, passed the following resolution:

> *Resolved*, That the Secretary of War be, and he is hereby, directed to send to the Senate any and all facts bearing directly or indirectly upon the truth of the charge publicly made that human slavery exists at this time in the Philippine Islands and that human beings are bought and sold in such islands as chattels.

In the debate preceding the passage of this resolution there was read part of a letter from Mr. Dean C. Worcester, the secretary of the interior of the Philippine Islands, which constituted, in part at least, the basis for the resolution.

There had been other public references to this and an official reference in the annual report of Mr. Worcester as secretary of the interior for 1912.

It was found that there were in the War Department records of allegations, but no facts which bore on the truth of the allegations, nor was it found that there was any authoritative opinion or court decision which went to the adequacy of existing law in the Philippine Islands to meet conditions which were alleged to exist, and reply to this effect was made to the Senate.

Later Mr. Worcester submitted a printed report designed to justify the position which he had previously taken on this matter, and in which he alleged in considerable detail the existence of slavery, peonage, and the barter of human beings in the Philippine Islands, reciting that such conditions had existed for a number of years and that his efforts to bring about correction had not met the support which he felt they were entitled to.

It is needless at this time to go into this matter. Gov. Gen. Harrison has arrived in the Philippine Islands, and it is in order to determine if the laws of the islands are adequate to meet the conditions alleged to exist. If not, the laws should be amended. Even the absence of the conditions alleged would hardly justify the failure to enact provisions making such conditions impossible. If it is found that the existing law is adequate, then it should be adequately enforced.

Since writing the foregoing the department has been advised that a law on this subject has passed both houses of the Philippine Legislature, with slight differences, which are now pending adjustment.

In his first address to the Filipino people on his arrival in the islands, you authorized Gov. Gen. Harrison to say, as coming from you:

> We regard ourselves as trustees, acting, not for the advantage of the United States, but for the benefit of the people of the Philippine Islands. Every step we take will be taken with a view to the ultimate independence of the islands and as a preparation for their independence; and we hope to move toward that end as rapidly as the safety and the permanent interests of the islands will permit. After each step taken experience will guide us to the next. The administration will take one step at once. It will give to the native citizens of the islands a majority in the appointive commission, and thus in the upper as well as in the lower house of the legislature. It will do this in the confident hope and expectation that immediate proof will thereby be given in the action of the commission under the new arrangement of the political capacity of those native citizens who have already come forward to represent and lead their people in affairs.

There is evidence that this pronouncement has been well received both in the United States and in the islands. The step in advance announced therein, which has now been taken, will be carefully observed. Those best acquainted with conditions in the islands anticipate no evil consequences therefrom.

Recommendations.

My predecessors have recommended the passage of a bill authorizing an increase of the limit of the bonded indebtdeness for public works by the Philippine Government to $15,000,000. For the reasons given above under the heading of "Finances," it is possible that I shall be forced to repeat this recommendation. However, I shall not do this unless it shall appear on further study to be absolutely necessary.

In the past few years, with the best of motives and with a judgment which may be justified by the event, the Government has undertaken an elaborate plan of public improvements, embracing harbor works, road construction, building of schools, and other public works. The cessation or lessening of these works will require a readjustment, with a reduction of the number of employees in the bureau of public works. Such a curtailment is never acquiesced in without criticism coming from those who differ with the policy as well as from those directly interested in the projected improvements abandoned, and by those whose employment in the public service is discontinued.

The fact, however, had to be faced that the finances of the Government admitted of no choice in the matter. The improvements of the past several years required large expenditures.

A bonded debt of $5,000,000 was contracted, and a great deal of the current revenues were expended for this purpose. There have been and are now under construction in the Philippine Islands railroads which impose on the Government a contingent liability which will in part be met for a number of years from the revenues of that Government. The fixed charges against the Government to meet these obligations are considerable. In addition to that, with the construction of public works, particularly in the nature of roads in a tropical country, there is imposed the obligation of maintenance, which is in its nature an additional fixed charge.

It may be that the Government has, for the present and until its revenues are materially increased from existing sources, developed sufficiently in the direction of public works, however useful. If such is the case, it would be unwise at this time to enter into additional indebtedness.

PORTO RICO.

Personnel.

Gov. George R. Colton, who had been governor of Porto Rico since 1909, resigned on November 5, 1913, and was succeeded by Mr. Arthur Yager, of Kentucky.

While awaiting the arrival of Gov. Yager, the duties of that office were performed by Mr. M. Drew Carrel, the secretary of Porto Rico.

Gov. Yager arrived in San Juan on November 19, and was inaugurated on November 20.

Economic conditions.

Measured by its trade and production, the year has been one of exceptional prosperity in Porto Rico. There were shipped from the island 383,000 tons of sugar, an increase of 16,000 tons over the corresponding amount of the preceding year and an increase from about 55,000 tons per year in the last years preceding American occupation of Porto Rico. Almost 50,000,000 pounds of coffee were shipped out, invoiced at $8,511,316. Both in quantity and price this was the most favorable year for Porto Rican coffee since 1896. Furthermore, the exports of tobacco and its manufactures were in excess of any previous year while the exports of fruits were 30 per cent greater than in any previous year.

The unfavorable feature of the external trade was the lower price received for sugar, which resulted in a reduction of the total shipped by $5,000,000 in price with an increase of 16,000 tons in quantity.

Notwithstanding this, sugar represented slightly more than 50 per cent of the exports from the island. This great development of the sugar industry in Porto Rico has, with the advantages to the island, been accompanied by two unfortunate conditions—the first is the cultivation of lands in sugar cane which under normal conditions would have been continued in pasture or other crops, and the second was the rather wild speculation in certain sugar properties.

With the reduction of the high protection heretofore given sugar, which had resulted in this overextension and overspeculation, there would necessarily be a readjustment, the immediate effect of which would be a depression in the sugar industry and in those industries dependent thereon. The effect of this in Porto Rico would be great where the sugar industry has become the dominant industry of the island. The speculation, however, had of its own force and independently of the modification in the tariff brought about a depression in the industry which preceded the revision of the tariff and brought with it the necessity of a more conservative development. This should have the result of weakening any ill effects which may follow to Porto Rico due to the modification of the tariff on sugar. The readjustment due to these causes will impose a heavy obligation on the Government and leading agriculturists of Porto Rico.

The total exports and shipments from the island amounted to $49,000,000. The total imports and shipments into the island amounted to $37,000,000. Eighty-six per cent of the external commerce of the island was with the United States, which included purchases in the markets of the United States amounting to over $33,000,000. Practically all of the exports from Porto Rico, except coffee, are sold in the United States and all have been articles admitted free into a highly protected market. This is true of sugar, tobacco, and fruits. In addition to this, one-half of the Porto Rican coffee crop is sold in Cuba where, under the trade convention between the United States and Cuba, the Porto Rican coffee is given a differential of approximately 2 cents per pound.

Finances of the government.

The total revenue receipts of the island for the year were $6,507,480.41, a slight decrease from the preceding year.

The legislative assembly enacted laws revising the excise and license taxes. The local estimate is that these laws will increase the income from these sources by $1,700,000 per annum.

The insular revenues continue barely sufficient to support the government and would be entirely inadequate if they did not include the local internal-revenue and custom receipts.

The legislative assembly concurrently with increasing the revenues made more liberal provisions for education and sanitation. The excellent work accomplished and being undertaken by both of these services is set forth in the report of the governor of Porto Rico submitted herewith.

Political situation.

Notwithstanding the wonderful development of Porto Rico in the past 10 years, a development due almost entirely to the stimulus to the industries of the island given by free access to the American market and the accompanying advantages in the market of Cuba due to our trade convention with that island, Porto Rico has been by no means free from political agitation.

It would seem from the records that this agitation had been largely the result of the failure to confer American citizenship in some form on the people of the island, now known as "citizens of Porto Rico." I have been informed that in 1906 and in 1910 there was apparently a unanimous request for this citizenship. However, in 1913, in the closing days of the Sixty-second Congress, the lower house of the Porto Rican Legislative Assembly, through its speaker, for reasons not made clear to this department, urged that the bill then pending in the Senate, which had passed the House, providing for the granting of American citizenship to citizens of Porto Rico, be not at that time passed.

The political situation in Porto Rico has been further complicated by the development in the last few years of a demand for independence of the island under some form of protection or tutelage of the United States. This demand represents the idea of but a few people. I believe that it is idle to consider or to discuss any future for the people of Porto Rico as separated from the United States.

Weighing such evidence as has come before me, I am of the opinion that practically all the people of Porto Rico desire American citizenship. I believe that to avoid possible legal complications this citizenship should be granted on the individual application of the Porto Rican citizen under conditions which make this application as simple as possible without expense to the applicant. I am of the opinion that the Porto Ricans should be given, as opportunity presents itself, a greater participation in the central government of the island. I believe that this participation will not result in a backward step in the civil progress of the island.

THE PANAMA CANAL.

The satisfactory progress of the work on the Panama Canal during the fiscal year is shown in detail in the annual report of the Isthmian Canal Commission, which is ready for transmission to Congress as a separate document and which will be submitted to you for that purpose.

The organization of the various units of the commission continued as shown in previous annual reports, except for minor changes, until January 1, 1913. The division engineer of the Pacific division resigned, effective December 12, 1912, which necessitated a reorganization of the work on the Pacific side, which was divided between the second division and the newly created fifth and sixth divisions of the chief engineer's office, as shown in detail in Col. Goethals's report. His report also details a few other changes, including the transfer, on May 1, 1913, of the dredging work in the Atlantic division to the sixth division, thus consolidating it with the dredging organization of the Pacific side.

The main features of the work during the year, with some of the latest available data, are as follows:

Excavation.

During the year 30,113,724 cubic yards were excavated, as compared with 30,302,261 cubic yards in the preceding year. There were excavated by steam shovels 17,035,351 cubic yards, as against 19,343,134 cubic yards in the previous fiscal year; 13,078,373 cubic yards were excavated by dredges, against 10,959,127 cubic yards in the fiscal year 1912. The total yearly excavation in the past six fiscal years through which the work has been in full swing is shown in the following table:

	Total.	Monthly average.
	Cubic yds.	*Cubic yds.*
1908	27,979,375	2,331,615
1909	37,966,926	3,163,910
1910	31,858,122	2,654,843
1911	32,203,931	2,683,661
1912	30,302,261	2,525,188
1913	30,113,724	2,509,477

On July 1, 1913, there remained 28,969,461 cubic yards of material to be excavated to complete the canal. This includes the addition during the fiscal year of 20,126,000 cubic yards to the estimate of July 1, 1912, of the entire amount of excavation for the canal, which now reaches a total of 232,353,000 cubic yards of excavation since the time the United States took over the work. The increase in volume of excavation over the estimate of July 1, 1912, is due to the following causes:

ATLANTIC GEOGRAPHICAL DIVISION.

	Cubic yards.
Dredging at coaling station and approach	3,050,000
Removing shoals in bay	370,000
Dredging canal channel, maintenance, etc	1,809,000
	5,229,000

GATUN LOCKS, DAMS, AND POWER HOUSES.

	Cubic yards.
Steam-shovel excavation for foundations power and control houses......	195,000
Dredging at north approach wall, Gatun Locks........................	220,000
	415,000

CENTRAL DIVISION.

Sluicing back of Gold Hill to lessen weight of bank..................	2,057,000
Excavation of diversions and accessories..............................	156,000
Excavation canal prism and slides....................................	9,067,000
	11,280,000

PACIFIC GEOGRAPHICAL DIVISION.

Wet excavation, including maintenance................................	3,065,000
Dry excavation, Miraflores Locks, Dams, and power houses.............	5,000
	3,070,000
Less decrease in estimate for dry excavation in canal channel and accessories and at Pedro Miguel Locks and Dams........................	377,000
	2,693,000

PACIFIC TERMINALS AND SHOPS.

Dry excavation...	229,000
Wet excavation...	280,000
	509,000
Grand total net increase..	20,126,000

The following table shows a comparison of the total excavation by divisions between the estimate of December, 1908, and the revised estimates made at different dates since that time:

	December, 1908.	July, 1910.	September, 1911.	July, 1912.	July, 1913.
Atlantic division....................	43,077,310	43,357,345	47,227,822	47,522,822	53,167,000
Central division.....................	89,794,493	97,125,018	101,801,296	106,416,296	117,697,000
Pacific division.....................	41,794,791	42,055,403	46,294,261	58,287,261	61,489,000
Total........................	174,666,594	182,537,403	195,323,379	212,226,379	232,353,000

The following table shows the status of excavation work on October 1, 1913:

		Cubic yards.
Estimated French excavation usable in present plan....................		29,908,000
Estimated amount of excavation required on May 4, 1904...............		232,353,000
Total amount required to complete canal under present plan.....		262,261,000
	Cubic yards.	
Amount taken out by French prior to May 4, 1904.........	29,908,000	
Amount taken out by Americans to Oct. 1, 1913...........	211,048,198	
		240,956,198
Amount remaining to be excavated Oct. 1, 1913................		21,304,802

Culebra Cut—Slides.

The following extracts from Col. Goethals's report indicate the condition of the largest slides in the Culebra Cut at the close of the fiscal year:

The total amount of material due to slides so far removed aggregates 22,570,200 cubic yards, or an increase of 2,304,200 cubic yards over that estimated in the last annual report. Slides and breaks increased as the cut was deepened. No treatment has proven effective for slides when once developed except that of excavating and hauling away material from the moving mass until the slide comes to rest or until the angle of repose for the particular material in motion is reached.

The predictions of the geologist in the last annual report, with reference to the Cucaracha slide, that "the end of the activity of this slide is now well in sight, however, because all loose surface stone and clay has almost slid off, exposing several large dikes and flows of basalt which would successfully maintain in place most of the remaining material," have not been realized. The bottom grade of the canal had been reached and the widening cuts had progressed satisfactorily until within approximately 60 feet of the line of the prism was reached on the east side, when on January 20 the basalt rocks broke and there slid into the cut approximately 2,000,000 cubic yards of material, extending completely across the cut, topping the tracks on the 67-foot level, and completely stopping the passage of trains from the north. Bottom grade was subsequently reached for sufficient width to put in drainage pipes for handling the water from the north, but the rains saturating the loosened material occasioned a flattening of the slope, thus causing another movement, and the weight of the superimposed mass broke the pipes. Work was continued on the slide during the year, but principally for the purpose of maintaining the tracks on the 67-foot level open for the passage of trains. This slide at the close of the fiscal year covered an area of approximately 50 acres. The total amount removed thus far since July, 1905, when it began moving, is 3,859,500 cubic yards, leaving approximately 1,500,000 cubic yards still to be removed. The material on the south side of the slide is practically all clay; the middle of it consists of clay and spalls and the north side of it rock with a mixture of clay. The clay and the clay and spalls can be easily handled by suction dredges, while the material on the north side can be handled by dipper and ladder dredges.

From the West Culebra slide 1,922,700 cubic yards were removed during the year, including material taken from the upper benches, making a total from the time this slide developed in October, 1907, of 8,687,600 cubic yards, leaving approximately 2,390,000 cubic yards to remove, if all the material on the top of the bank is taken out. This slide covers an area of 68 acres.

From the slide at East Culebra 1,676,300 cubic yards were removed during the year, making a total of 5,966,200 cubic yards removed since the slide first developed in January, 1907, and it is estimated that 2,000,000 cubic yards remain. This slide covers an area of approximately 55 acres and extends from the north side of Gold Hill or approximately 5,500 feet.

* * * * * * *

Due to the development of slides and beginning February 20, 1913, the split-shift system was inaugurated on shovels working in the slides and on the upper benches, so as to secure 12 hours' work per day. While this increased the cost to some extent, it was more than justified, after the decision had been reached to admit the water into the cut in October, in order to remove as much of the remaining rock in the dry as possible.

On October 1, 1913, the excavation in Culebra Cut was 94.41 per cent completed, 109,229,155 cubic yards out of a total of 115,696,455 cubic yards having been taken out, leaving on that date 6,467,300 cubic yards to be excavated, or 5.59 per cent.

Concrete work.

Concrete work in the canal locks is nearly completed, the aggregate amount in place at the close of work on October 25, 1913, being 4,481,109 cubic yards. The last concrete for the Gatun Locks proper, as distinguished from that necessary to finishing work, was mixed and placed on August 16, 1913. At the close of work on that day the total amount of concrete placed was 2,045,485 cubic yards. The following is a statement of the concrete laid at other sites up to October 25, 1913:

	Cubic yards.
Pedro Miguel Lock	924,475
Miraflores Locks	1,511,149
Gatun spillway	237,331
Miraflores spillway	76,346

Gatun Dam.

On October 1, 1913, the Gatun Dam was 99.98 per cent completed, the actual amount of material in place, after allowing for consolidation, being 21,986,893 cubic yards.

Terminals.

The Pacific terminals are being constructed by the canal commission, and will consist of a main dry dock capable of docking any vessel that can utilize the locks, a smaller dry dock and plant for supplying coal and fuel oil to vessels, the necessary wharves and piers for commercial purposes, and permanent shops for use in connection with the dry docks.

The Atlantic terminals consist of wharves and piers at Cristobal, including the Cristobal mole, all of which are being constructed by the Panama Railroad Co. at its own expense, and the main plant for supplying coal and fuel oil to vessels. The cost of the coaling plant will be divided between the commission and the Panama Railroad Co., while the commission will furnish facilities for oil.

Col. Goethals states that due to the delay in receiving the necessary legislative authority, active construction of the terminals could not be begun until last fall, and that consequently the terminal facilities can not be completed by the time the canal is ready for passing vessels.

Fortifications.

The actual construction work was continued by the commission during the year on the gun and mortar batteries, and detailed surveys for the location of land defenses were well advanced to completion and arrangements made to begin work on July 1, 1913, on the construction of redoubts, planned by a board appointed for the purpose. During the year 416,542 cubic yards were excavated, 131,952 cubic yards of concrete were laid, 93,808 linear feet of piling were driven and 100,957 cubic yards of filling were placed by one of the dredges.

Health conditions and sanitation.

The department of sanitation, under the direction of Col. William C. Gorgas, Medical Corps, has had charge of the sanitary work in the cities of Colon and Panama, and the oiling of ditches and other water in the Canal Zone. The work of this department has been most efficient, and has resulted in the maintenance of a condition of sanitation so excellent that the working force has been maintained in the highest state of efficiency. It designates the remaining sanitary work to be done in the Canal Zone and exercises such supervision as may be necessary to insure proper performance of the work. In addition, the department has charge of the hospitals and quarantine. The total admissions to hospitals and sick camps, including those sick in quarters, was 33,779; the daily average number of employees sick was 19.4 out of every thousand, as against 22.91 for 1911–12 and 24.77 for 1910–11, this being on the basis that the total numbers employed during the years mentioned were 54,000, 50,008, and 49,129, respectively. The total number of deaths among employees was 483, of which 36 were Americans, 58 were white employees of other nationalities, and 389 were blacks. The total number of deaths from accidents or external causes among all employees was 164, as against 154 for the preceding year. In addition, on the recommendation of the medical examining board, 183 deportations were made—134 for diseases and 49 for injuries.

The death rate for all white employees was 7.46 per thousand, as compared with 9.21 in the year 1911–12, and the death rate for white employees from the United States was 5.38 as against 5.90 in the preceding year. The death rate for black employees was 9.39, as against 10.47 in 1911–12, and the rate for all employees was 8.94 as against 10.16 for 1911–12. The death rate for the entire population of the cities of Panama and Colon and of the Canal Zone, including employees, was 22.33, as against 19.82 for 1911-12.

Force.

The force employed increased during the first nine months of the year until on March 26, 1913, the number reached the highest point in the history of the canal work—44,733 men being actually at work on that day, of whom 39,089 were commission and Panama Railroad employees and 5,644 were employees of contractors for the lock gates, emergency dams, and for other contracts connected with the work. The force fluctuated between 34,957 on June 30, 1912, and the maximum on the date above specified, and numbered 43,350 at the close of the fiscal year.

It was anticipated that in the fiscal year 1913 it would be necessary to repatriate a considerable number of laborers brought to the Isthmus under contract. The constant demand for labor obviated this, and the number of repatriations was relatively small. Portions of the canal work are rapidly approaching completion, and the force of unskilled labor has been much reduced during the past few months, and efforts have been and are being made to place the labor to the best advantage on work opening up in near-by countries. All contract laborers will be repatriated.

First operation of locks.

The gates in the west flight of Gatun Locks having been completed, the locks were operated for the first time on September 26, 1913, when a Government tug was passed through from the Atlantic channel to Gatun Lake. The gates in the east flight are not entirely completed, but soon will be.

The first lockage at the Pacific end of the canal was effected October 14, 1913, when some barges and tugs were raised through the west flight of Miraflores Locks from the Pacific entrance channel to the surface of Miraflores Lake. The gates in the east flight of these locks will soon be completed.

The gates and machinery of the east flight at Pedro Miguel Locks were in readiness to effect the lift to Culebra Cut on the same day, though it was impracticable to do so because of insufficient depth of water in the cut south of Cucaracha slide. A pipe-line suction dredge was towed through this flight on October 24. The gates in the west flight at Pedro Miguel are nearing completion.

Completion of the canal.

The increase in slides in the Culebra section during the year made it impossible to complete the excavation of the Culebra Cut by the date tentatively estimated last year, namely, July 1, 1913. On account of the nature of some of the slides it was concluded that they could be more expeditiously and economically removed by dredging, and it was decided to let the water into the cut by blowing up the Gamboa Dike on October 10, 1913. Dredges were at once put to work removing this dike; others were placed at work on either side of the Cucaracha slide, and excavation by dredges on the other slides was also commenced, the intention being to permit the passage of vessels through the canal as soon as channels of full depth and of sufficient width have been secured.

On October 10, 1913, the elevation of Gatun Lake was 67.7 feet above sea, and it is expected that with an average rainy season the lake will reach its normal level of 85 feet above sea some time in December, 1913. On October 28 the level of the lake was approximately 72 feet above sea.

An erroneous impression was caused by the announcement that the water would be turned into the Culebra Cut on October 10, 1913, as it seems to have been assumed that the canal would be practically finished on that date. Col. Goethals points out that the passage of commercial vessels is dependent upon the time when proper channels can be dredged through the slides as above indicated, and should additional slides occur they will necessarily postpone the date when this will be accomplished.

The official date of opening of the canal is still set for January 1, 1915, but it is the intention to allow vessels to utilize the canal as soon as practicable, although no definite statement can yet be made as to when this will be. It is the intention to give due advice to shipping interests as soon as any assurance can be given that vessels can be passed through the canal without unnecessary delay.

Panama Railroad Co.

The operation of the Panama Railroad Co. for the fiscal year will be shown in full in its annual report which will be submitted to you for transmission to Congress at an early date.

After meeting the total cost of operation, together with fixed charges of $113,585.39, and charges for depreciation of rolling stock, floating and plant equipment amounting to $268,707.08, the net income of the company for the fiscal year amounted to $2,179,175.50, as against $1,762,049.22 for the previous year, or an increase of $417,126.28.

During that period $2,275,905.70 was applied to additions and betterments of plant and equipment. The steamship line contributed to the above net revenue—$221,489.92—an increase over the previous fiscal period of $423,251.05 in its earnings.

The indebtedness of the company to the United States Government on account of advances for new equipment and construction and retirement of first mortgage 4½ per cent bonds remains, as on June 30, 1912, at $3,247,332.11, the company having been relieved by Congressional action from further payments on account of principal or interest.

At the end of the fiscal year the company had $2,520,216.13 of available funds in hands of designated depositaries, and in addition securities purchased at a cost of $1,590,234.75, held in a reserve fund established September 12, 1911. The increase in investment from $1,493,463.50 in October, 1911, to the present figure of $1,590,234.75 is due to the reinvestment in securities of the accumulated interest.

In December, 1912, the California-Atlantic Steamship Co. announced its inability to continue operations, and the connection was discontinued by the retirement of the California-Atlantic Steamship Co., as of date January 1, 1913.

Independent operation in the coastwise traffic was maintained through an arrangement subsequently made by the company with the Luckenbach Steamship Co. (Inc.), which immediately succeeded the California-Atlantic Steamship Co. on the Pacific side.

During August, 1912, a pile-constructed dock on the Pacific side at Balboa, built and owned by the canal commission, but operated by the Panama Railroad Co. under a lease, collapsed, involving heavy loss to the company. The Pacific Mail Co.'s steamer *Newport*, berthed alongside at the time, was wrecked and sunk. Suit has been brought by her owners against the Panama Railroad Co. for $800,000, covering the cost of her salvage and rebuilding, together with cargo and other losses involved.

The very complete equipment of the company's vessels with life-saving devices has been supplemented by increased wireless facilities and the addition of a submarine signal service.

The two large steamers purchased by the Government, renamed *Ancon* and *Cristobal*, and placed in the service of the Panama Railroad Co. for the transportation to the Isthmus of 1,000,000 tons of cement for canal construction have, in fact, carried 1,750,000 tons. They will be continued in the line so long as there is any material quantity of cement to be moved.

The building of the Hotel Washington at Colon was completed and thrown open to guests in February last.

At a meeting of the board of directors held in Washington, which I attended, every member submitted for consideration a written report embodying his views upon the policy to be followed by the Panama Railroad Co. after the opening of the canal to commerce. After careful consideration of the question it was resolved to continue, until further action, operating the railroad and steamship line as at present.

Rapid progress has been made in the work of constructing the company's extensive terminal docks at Cristobal. The substructure is completed, plans perfected and contracts let for the erection of the superstructure.

By arrangement with the canal commission the railroad contributes $1,000,000 toward the cost of a terminal coal-handling plant to be erected on Mindi Island in close proximity to its Cristobal docks, to be connected with the mainland by trestle. The plant when completed is to be operated for the joint account of the Government and railroad company.

Five hundred thousand dollars was appropriated for the construction of a bascule bridge across the canal at a point to be designated by the commission to provide communication between the company's relocated line of road and the existing railroad on the west side of the canal and to accommodate vehicular and pedestrian transit of the canal.

RIVER AND HARBOR IMPROVEMENTS.

The total amount actually expended under the direction of the Chief of Engineers in connection with the improvement of rivers and harbors during the fiscal year ended June 30, 1913, was $40,953,568.09. This is $5,309,649.41 more than the expenditures for the fiscal year 1912. Sixty-eight officers of the Corps of Engineers, or over one-third of the entire force—201—were engaged upon river and harbor work, 27 of them being employed exclusively on that character of work.

Of the 186 officers actually on duty June 30, 1913, 92 were performing duties of a military character exclusively and 94 were engaged wholly or partly on nonmilitary duty, 50 of them, or over 26 per cent, being exclusively so engaged.

In the annual report of the Chief of Engineers the different projects for river and harbor improvements are described in detail, giving a history of each project and a description of the work which has been done from the inception of the improvement to the close of the fiscal year, together with statistics of the commerce of the locality and other pertinent information.

The following table shows the different items for which expenditures were made during the fiscal year 1913:

Rivers and harbors (general, including examinations, surveys, and contingencies)		$32,253,801.43
Removing sunken vessels		115,208.81
Operating and care of canals		2,222,906.87
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers		26,557.60
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers		101,442.43
Gauging waters of the Mississippi River and its tributaries		9,072.25
Maintenance of South Pass Channel, Mississippi River		127,840.09
Examinations and surveys at South Pass, Mississippi River		11,490.00
Operating snag boats on the Ohio River		25,758.17
Prevention of deposits in New York Harbor		83,643.54
California Débris Commission (expenses)		10,123.44
Permanent International Commission of Congresses of Navigation		1,460.99
Meeting of Permanent International Commission of Congresses of Navigation in the United States		1,074.83
Claims for damages by collision, river and harbor works		2,076.84
International Waterways Commission		14,022.15
Building engineer school for river and harbor instruction		271.50
Mississippi River Commission:		
Improving Mississippi River	$4,638,163.60	
Deduct amounts reimbursable	88,748.26	
	4,549,415.34	
Maintaining and protecting levees of the Mississippi River and tributaries against floods	20,585.12	
Rebuilding levees of the Mississippi River and tributaries damaged by floods	1,366,254.67	
Improving Yazoo River and tributaries, Miss. (Yazoo River at mouth)	1,305.83	
Preservation and maintenance of river and harbor works (Yazoo River at mouth)	9,256.19	
		5,946,817.15
		40,953,568.09

In addition to the foregoing, $1,507.32 was expended in completing the enlargement of Governors Island, in New York Harbor. This work, begun in August, 1901, has cost about $1,100,000. There has been added to the island, by dredging from the harbor, about 103½ acres, which has been turned over to the commanding officer at Fort Jay as a part of the military reservation of Fort Jay.

INTERNATIONAL WATERWAYS COMMISSION.

The commission created by the act approved June 13, 1902, to investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada submitted its final report upon the proposed dam at the outlet of Lake Erie on the 20th of June last. This report was transmitted to Congress and was printed as Senate Document No. 118, Sixty-third Congress, first session.

The commission has thus completed the work for which it was originally organized. It is still engaged, however, under the Department of State in ascertaining, reestablishing, and marking upon the ground and delineating upon modern charts the location of a portion of the international boundary between the United States and Canada, which work was especially assigned to it by Article IV of the treaty between the United States and Great Britain dated April 11, 1908. It expects to complete that work during the current year and then go out of existence.

REVOLUTIONARY WAR RECORDS.

More than 20 years ago Congress began to provide for the concentration in one office of the scattered military records of the American Revolution by directing, in the act approved July 27, 1892, that the military records of the American Revolution preserved in the Treasury and Interior Departments be transferred to the War Department. In 1894 it was further provided that all military records relative to the armies of the Revolutionary War and the War of 1812 now in any of the executive departments be transferred to the Secretary of War to be preserved, indexed, and prepared for publication. Large accessions to the War Department collection of these records resulted from this legislation. In addition to this an effort was begun by correspondence to add to the collection by securing the temporary loan of State records in order that copies of them might be made. Several of the States loaned their military records of the Revolutionary War; these records were copied, and the originals were returned to the States. Work in this line was finally suspended, however, because of the lack of funds for its successful prosecution by means other than correspondence, and because of the pressure of other work upon the limited clerical force available.

Means for continuing this work were provided by the act of Congress approved March 2, 1913, which authorizes and directs the Secretary of War to collect or copy and classify, with a view to publication, the scattered military records of the Revolutionary War, including all troops acting under State authority, and makes an appropriation of $25,000 for that purpose, to be expended under the direction of the Secretary of War. As a preliminary to the commencement of the active work of obtaining copies of Revolutionary War records under this act, correspondence was begun with the State authorities of the thirteen original States and with the officers of the several patriotic societies of that war. That correspondence has indicated the whereabouts of considerable collections of military records of that war and affords data on which to begin the work of obtaining copies of those records; but much remains to be done in the way of correspondence with a view to locate records, and in the examination and copying of records found, before the collection of military records of the Revolutionary War in the custody of the War Department can be considered sufficiently complete for publication by the Government.

Propositions to publish the military records of the Revolutionary War have been brought to the attention of Congress frequently during the past 10 or 15 years. In 1908 the Committee on Printing of the House of Representatives had under consideration House joint resolution No. 140 and House bill No. 19082, Sixtieth Congress, first session, which resolution and bill proposed to provide for the printing of the "Complete orders of Gen. George Washington during the War of the Revolution," and of the "Rolls of soldiers, sailors, and marines, and the orders, returns, and reports, together with the official correspondence, relating to the War of the Revolution." The response of the Secretary of War (Mr. Taft) to a request of the committee for an expression of opinion on this matter is printed in the adverse report of the committee. (H. Rept. No. 1568, 60th Cong., 1st sess.)

In carrying out the provisions of the act of March 2, 1913, Capt. Hollis C. Clark, United States Army, retired, has been appointed director of the work to collect or copy and classify the scattered military records of the Revolutionary War, with a view to their publication. It is obvious, however, that the work, involving records scattered among State archives, historical societies, patriotic societies, and individual owners, not only in the thirteen original States, but elsewhere in this country and in Europe, will require years for its completion, and that therefore the matter of publication is far distant in the future.

It has been suggested that a competent advisory board of historians and archivists be appointed to supervise this work, with a representative of the Army War College and of the Naval War College as members of the board to advise in technical points, because the lessons of history are the bases of their work of training in the conduct of war.

After careful consideration of the matter, I am of opinion that it is not desirable to begin editing these records for publication, or to take other measures with a view to their publication, until the collection of those records has been made as nearly complete as possible. It is certain that some years must elapse before the work of collecting those records can be considered as nearing an end, and consequently there appears to be no urgent necessity at the present time for the designation of a committee such as suggested, the work immediately called for being the collection or copying of original records. The officer in charge of the work will be assisted in his search by local historians, archivists, librarians, and antiquaries. It is probable that not many original documents will be *collected*, as their purchase is forbidden by the last clause of the act, and it is not to be expected that their owners will present them to the Government. It is presumed that little difficulty will be encountered in obtaining permission to *copy* the documents, and it is intended to do this by photographic or other process.

FINANCIAL STATEMENTS.

With respect to the estimates that have recently been submitted for the fiscal year 1915, I think it is very necessary to recall a most important and striking fact. In the annual reports of my predecessors for the years 1909, 1910, and 1911, reference was made to the reductions in their estimates, which in their view were entirely unwarranted from a military standpoint, but which had been made as a temporary measure of economy on account of the demand for a reduction of appropriations.

The effect of these cuts, which were made with no reference whatever to the military establishment, necessarily places me now in the position of either not asking for what the Army needs or of seeming to ask for more than my predecessors. In these circumstances, the estimates which I have submitted, after careful personal consideration, represent what in my judgment is the minimum amount that will be required to maintain the military establishment consistent with good administration.

The estimates submitted in December, 1912, for the support of the regular military establishment—that is, the Army and the Military Academy—during the fiscal year 1914, involving chiefly things consumed during the year, were $3,721,022.54 greater than the appropriations for the fiscal year 1913. The similar estimates which I have recently submitted for the fiscal year 1915 were $5,820,503.88 greater than the appropriations for the current fiscal year (1914), the increase consisting in round numbers of $4,500,000 more for pay, subsistence, and regular supplies of the Army, horses for Cavalry, Artillery, Engineers, etc., barracks and quarters, military post exchanges, clothing, and camp and garrison equipage, military aeronautics, ordnance stores and supplies, ammunition, and automatic machine rifles. The sum of $1,349,083.06 is asked for to replace ordnance stores and supplies destroyed by fire at Benecia Arsenal, Benecia, Cal., on October 18, 1912.

All of these increases, except those for military aeronautics, military post exchanges, and replacing ordnance stores and supplies destroyed by fire at Benicia Arsenal, are made necessary by an increase in the enlisted strength of the Army within the limit authorized by the act of February 2, 1901, incident to the garrisoning of Oahu and the Canal Zone and by a slight increase in the cost of the ration.

The department is also asking for increased amounts for improvements and plant of a more or less permanent character coming under the head of "Fortifications and other works of defense," and "Military posts," etc., which include such objects as gun and mortar batteries, fire control at fortifications in the United States and insular possessions, electrical installations at seacoast fortifications, searchlights for harbor defenses, sea walls and embankments, preservation and repair of torpedo structures, casemates, galleries, etc., for submarine mines, armament of fortifications, submarine mines, fortifications in insular possessions, construction of barracks and quarters, etc., in the Hawaiian Islands, and military structures in the Philippine Islands, aggregating in round numbers $5,300,000.

There is also an increase in round numbers of $4,800,000, in the estimates for the Organized Militia, for encampment and maneuvers, equipment of Coast Artillery armories, field artillery and ammunition therefor.

All these increases, as heretofore, are appreciably affected by the constantly increasing cost of materials and supplies furnished the Army.

Annexed hereto as Appendix A is a tabulated statement showing the expenditures for the last fiscal year (1913), the estimates and appropriations for the present fiscal year (1914), and the estimates for the next fiscal year (1915). This statement shows only expenditures from appropriations made by Congress in pursuance of estimates submitted by the War Department. It does not, therefore, include expenditures from appropriations made by Congress without estimates from the War Department, known as "Indefinite annual appropriations," "Permanent annual appropriations" and "Appropriations for war claims and relief acts." Expenditures from appropriations of these three classes are included in the statements annexed hereto as Appendixes B, C, D, and E, which are complete and detailed statements of the financial transactions of the department during the fiscal year ended June 30, 1913, covering every appropriation made for the service of the fiscal years 1913, 1912, 1911, and 1910 and prior years, showing all balances from appropriations, the amounts appropriated under each title of appropriation, the amounts drawn from the Treasury, and the unexpended balances of each appropriation remaining in the Treasury June 30, 1913, subject to requisition. These statements show also the amounts covered into the surplus fund of the Treasury from all appropriations under the control of the War Department which are no longer available or required for expenditure.

RETIREMENT OF CIVIL-SERVICE EMPLOYEES.

Heads of departments and chiefs of bureaus have many times recommended the enactment of legislation for the retirement of civil-service employees, and I find that in four of the annual reports of my immediate predecessors in the War Office the principle of retirement for superannuated employees in keeping with the growing trend of railroads and other great business organizations in this direction has been strongly indorsed.

Conferences with the bureau chiefs of this department and a study of the subject generally lead me to the conclusion that some provision for retirement of faithful employees for superannuation at a prescribed age will work to the advantage of the Government in the civil service and is demanded if this service is to be administered on better business principles, as now recognized in the case of large private business organizations.

I find that the need for a retirement law has been pressed upon the attention of Congress at almost every session during the past 27 years. Since 1886, 72 bills on this subject have been introduced in Congress, but so far as I am advised none of these numerous retirement bills has ever been favorably reported from the committee to which it was referred except the retirement measures introduced by Mr. Gillett, which were favorably reported to the House by the Committee on Reform in the Civil Service on February 23, 1909, and on April 4, 1910. Another measure introduced by Mr. Gillett during the special session of the Sixty-third Congress (House bill 3336) was referred to the same committee, but no further action has been taken.

The Gillett bills were all based upon the principle that it is for the interest of the Government to be relieved of its employees when by age they become unserviceable, or partially unserviceable; that it would lower the standard of the Government service if employees were dismissed when their usefulness becomes impaired by age unless they were assured against want; that it is the business of the employees themselves to make provision for their old age, and that the Government will hereafter, in its own interest, compel them so to do, in the case of employees who enter the service hereafter, by deductions from their monthly salaries of a sum sufficient to provide an adequate annuity, and for all employees under 70 who are now in the service, by deductions from their monthly salaries until they reach the age of 70, and where the deductions so made are insufficient for the purpose, by such contributions by the Government in addition thereto as may be necessary to provide an annuity not to exceed $600. In the case of employees 70 years or older, and therefore subject to immediate retirement, the Government to provide the entire annuity.

On April 7, 1913, Mr. Austin introduced a bill (H. R. 196, 63d Cong., 1st sess.), the material differences between this bill and the pending Gillett bill being that the Austin bill provides for a 15 per cent increase of salary and for interest on the employee's savings at the rate of 5 per cent instead of 4. The Austin bill also makes provision for retirement for disability, while the Gillett bill does not.

On May 6, 1912, President Taft transmitted to Congress with his "unqualified approval" a retirement plan recommended by the President's Commission on Economy and Efficiency and embodied in a tentative draft of a bill which accompanied the commission's report. The essential differences between this bill and the pending Gillett bill are that its provisions were limited to the classified service in the District of Columbia, where, as stated by the President, "the loss from superannuation is greatest," the idea being to keep the plan within narrow limits during its experimental stage, with a view to its extension generally throughout the service if it should prove successful in the executive departments and offices at Washington; and that the annuity was fixed at one-half of the average annual pay for the entire period of service for annual salaries of $1,200 or less and at $600 a year for annual salaries above $1,200.

The maximum cost to the Government for the annuities for persons thus retired is estimated by the President's Commission on Economy and Efficiency, under its plan, to be $16,112,603, extending over a period of about 40 years. This does not take into account the saving to the Government that would result from a discontinuance of the payment of that part of the salaries now paid to superannuated employees which is not earned.

A modified plan of retirement which has been prepared as a result of the conferences with bureau chiefs above referred to is submitted herewith as Appendix F. In brief, this plan provides for the compulsory retirement of all employees of the classified departmental service in Washington at 70 years on an annuity of one-half of their annual pay, not to exceed a maximum of $600 where the Government pays any part of the annuity, or $900 when the employee provides it all, with the privilege of retirement between the ages of 65 and 70 on such smaller annuity as the funds to the credit of the employee will procure; all employees of the age of 70 or above in the service on the date of the approval of the act to be retired at the expense of the Government.

The Gillett bills, the Austin bill, the Economy and Efficiency Commission bill, and the War Department plan all provide in effect for a compulsory savings form of retirement instead of a straight pension provided entirely by the Government.

I feel quite sure that it is practicable to save the Government money and to benefit the Government service by establishing a retirement system. I do not believe, however, that there is any possibility of such a system being provided for in the near future by any measure that will call for larger appropriations from the Federal Treasury than would be required to pay the annuities for those now in the service—that is, the entire annuity of all those who are now 70 years of age or over, and part of the annuity of all others now in the service who shall remain therein until they reach 70 years of age; and I think it wise that the maximum annuity of which the Government pays any part should be fixed at one-half the annual salary for employees with annual salary of $1,200 or less and at $600 for those whose annual salary exceeds $1,200. All persons who accept employment under the Federal civil service after the passage of a retirement act should do so under provisions of law which would compel the accumulation of a fund derived from monthly deductions from their salaries that would make it humanely possible for the Government to retire them at 70 years of age, or before that age should superannuation or other disability require it.

Mr. Hamill has introduced and strongly advocates a bill which was referred to the Committee on Reform in the Civil Service on May 15, 1913, which provides for a straight pension. Objections have been urged against a straight pension paid for entirely by the Government that in practice it has operated unsatisfactorily in countries where it has been tried, and that it has a tendency to defeat the primary interest of the Government in the matter, which is to produce a condition under which an employee of long and faithful service may without inhumanity be removed when he reaches a condition of incapacity to render effective service. Under the contributory plan an employee after a considerable length of service would receive periodically from the fund accumulated by his contributions a sum sufficient to keep him from actual want, whereas under the straight pension plan he can not derive any benefit from the pension until he reaches the prescribed age. In other words, under the straight pension plan there would be almost the same situation that confronts us now, namely, the retention in the service, through considerations of humanity, of persons who have become incapacitated for efficient service.

ENUMERATION OF REPORTS SUBMITTED.

I submit herewith the report of the Chief of Staff, and the report made to him by the Chief of Coast Artillery; the reports of the heads of bureaus of the War Department; the reports of department commanders; the reports of the commissioners of the four military parks, of the superintendent of the Military Academy, and of the Governor of Porto Rico.

The acts of the Philippine Commission and Legislature passed since those transmitted with the last annual report, and the report of the Philippine Commission, will shortly be transmitted.

LINDLEY M. GARRISON,
Secretary of War.

APPENDIX A.

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

The expenditures for the last fiscal year (1913), the estimates and appropriations for the present fiscal year (1914), and the estimates for the next fiscal year (1915) are as follows:

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
CIVIL ESTABLISHMENT.				
Salaries	$1,787,042.86	$1,812,088.00	$1,776,438.00	$1,774,058.00
Contingent fund for Secretary of War		10,000.00		
Contingent expenses, War Department	40,687.27	75,500.00	48,000.00	48,000.00
Stationery, War Department	16,849.37		25,000.00	25,000.00
Postage to postal-union countries, War Department.	150.00		500.00	250.00
Rent of buildings, War Department	12,720.00	12,720.00	12,720.00	10,420.00
Statement of receipts and expend tures in Cuba and the Philippine Islands	344.67			
Salaries and contingent expenses under Superintendent Public Buildings and Grounds	81,526.33	83,690.00	86,990.00	86,990.00
Total civil establishment	1,939,320.50	1,993,998.00	1,949,648.00	1,944,718.00
MILITARY ESTABLISHMENT.				
SUPPORT OF THE ARMY.				
Secretary's office:				
Contingencies of the Army	19,215.01	25,000.00	25,000.00	50,000.00
Construction and maintenance of military and post roads, bridges, and trails, Alaska		100,000.00	155,000.00	125,000.00
International rifle competition, Camp Perry, Ohio	5,000.00		25,000.00	
Office of the Chief of Staff:				
Army War College	9,750.00	9,000.00	9,000.00	9,000.00
Contingencies, military-information section, General Staff Corps	6,166.32	10,000.00	10,000.00	15,000.00
United States service schools	24,604.15	30,350.00	30,350.00	30,350.00
The Adjutant General's Department:				
Contingencies, headquarters of military divisions and departments	5,768.05	7,500.00	7,500.00	7,500.00
Chief of Coast Artillery:				
Coast Artillery School, Fort Monroe, Va.	27,529.12	28,000.00	28,000.00	28,000.00
Chief Signal officer:				
Signal Service of the Army	389,341.34	375,000.00	250,000.00	250,000.00
Washington-Alaska military cable and telegraph system	114,566.87	50,000.00	50,000.00	
Annunciator buzzer systems at target ranges	7,190.63	10,100.00	4,000.00	
Wireless telephone apparatus	1,244.20			
Military aeronautics			125,000.00	300,000.00
Purchase and maintenance of field glasses for Infantry and Cavalry				12,500.00
Purchase of motor cycles				5,000.00
Maintenance of annunciator buzzer systems at target ranges				3,800.00
Special Infantry telephone equipment				10,016.00
Signaling equipment for coast-defense posts				12,000.00
Commercial telephone service at Coast Artillery posts				6,000.00
Quartermaster Corps:				
Pay, etc., of the Army	48,559,881.28	48,516,080.28	47,054,950.08	49,208,595.60
Extra duty pay to enlisted men as clerks, etc., at Army division and department headquarters	1,436.20			
Subsistence of the Army	10,193,503.31	10,009,422.83	9,098,517.00	9,802,141.39
Regular supplies	7,632,952.29	7,660,153.00	7,652,648.00	8,351,264.85
Replacing regular supplies	72,985.82			
Equipment of officers' schools at military posts	4,106.46	5,700.00	5,700.00	
Incidental expenses	1,834,493.12	1,960,140.75	1,960,000.00	1,850,666.00

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
MILITARY ESTABLISHMENT—Continued.				
SUPPORT OF THE ARMY—continued.				
Quartermaster Corps—Continued.				
Replacing incidental expenses	$2,787.46			
Horses for Cavalry, Artillery, Engineers, etc	388,226.26	$325,240.00	$325,240.00	$565,285.00
Barracks and quarters	1,556,853.81	2,189,108.00	1,923,680.00	2,194,997.00
Military post exchanges	29,348.05	40,000.00	40,000.00	154,391.00
Transportation of the Army and its supplies	10,263,226.09	10,555,552.75	10,555,555.00	10,164,645.00
Roads, walks, wharves, and drainage	706,476.58	703,050.00	642,597.00	530,646.00
Water and sewers at military posts	1,889,345.35	1,549,910.00	1,534,412.00	1,531,258.00
Barracks and quarters, Philippine Islands	513,194.33	500,000.00	500,000.00	500,000.00
Clothing, and camp and garrison equipage	5,751,389.71	6,409,485.40	6,000,000.00	6,500,000.00
Replacing clothing, and camp and garrison equipage	529,989.54			
Construction and repair of hospitals	417,243.47	450,000.00	450,000.00	460,000.00
Quarters for hospital stewards	8,287.35	9,700.00	9,700.00	52,791.00
Shooting galleries and ranges	102,486.94	54,857.00	54,857.00	47,160.00
Maintenance, Army War College	9,752.30	10,700.00	10,700.00	10,700.00
Army storehouses, Corregidor Island, P. I	71,816.81			
Officers' quarters, remount depot, Front Royal, Va		150,000.00	150,000.00	
Claims for damages to and loss of private property	32,852.90	1,652.43	1,652.43	3,631.75
Rent of buildings, Quartermaster Corps	46,903.59	49,587.00	49,587.00	49,587.00
Reimbursement to District of Columbia for site acquired for a reformatory	33,000.00			
Equipping Army transports with life boats and rafts	67,670.72			
Medical Department:				
Medical and hospital department	744,333.42	775,000.00	750,000.00	800,000.00
Army Medical Museum and library	14,577.23	15,000.00	15,000.00	15,000.00
Replacing medical supplies	3,160.58			
Bureau of Insular Affairs:				
Care of insane Filipino soldiers	1,578.55	2,000.00	2,000.00	2,000.00
Care of insane soldiers, Porto Rico regiment of Infantry		500.00	500.00	500.00
Engineer Department:				
Engineer depots	30,844.31	30,000.00	30,000.00	30,000.00
Engineer school, Washington, D. C	22,550.66	25,000.00	25,000.00	25,000.00
Engineer equipment of troops	60,481.10	50,000.00	50,000.00	50,000.00
Civilian assistants to engineer officers	36,832.63	40,000.00	40,000.00	40,000.00
Pontoon shed, Washington Barracks, D. C		15,000.00	15,000.00	
Contingencies, Engineer Department, Philippine Islands	5,420.23	5,000.00	5,000.00	5,000.00
Ordnance Department:				
Ordnance service	303,562.91	312,000.00	300,000.00	300,000.00
Ordnance stores: Ammunition	205,661.75	200,000.00	200,000.00	250,000.00
Small-arms target practice	1,014,991.39	800,000.00	750,000.00	825,000.00
Manufacture of arms	1,115,078.30	600,000.00	600,000.00	500,000.00
Ordnance stores and supplies	753,338.38	700,000.00	700,000.00	900,000.00
National trophy and medals for rifle contests	6,782.83	10,000.00	10,000.00	10,000.00
Fire control in field batteries	13,126.13			
Automatic rifles (machine)	285,650.42	150,000.00		150,000.00
Replacing ordnance and ordnance stores	126,630.76			
Replacing ordnance and ordnance stores destroyed by fire at Benicia Arsenal, Cal				1,349,083.06
Total	96,075,157.01	95,524,789.44	92,231,145.51	98,093,508.65
Less repayment of funds heretofore reported as expended	82,952.42			
Total, support of the Army	95,992,204.59	95,524,789.44	92,231,145.51	98,093,508.65
MILITARY ACADEMY.				
Pay of Military Academy	701,002.72	806,260.69	749,614.87	791,233.11
Current and ordinary expenses	144,032.81	143,928.00	138,678.00	142,520.00
Miscellaneous items and incidental expenses	53,785.23	61,730.00	56,230.00	56,032.50
Buildings and Grounds	362,258.20	654,817.00	150,212.00	63,090.00
Total, Military Academy	1,261,078.96	1,666,735.69	1,094,734.87	1,052,875.61

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
MILITARY ESTABLISHMENT—Continued.				
MILITIA.				
Encampment and maneuvers, Organized Militia	$1,199,131.08	$350,000.00	$350,000.00	$1,350,000.00
Equipment of Coast Artillery armories, Organized Militia	223,140.39	275,000.00	185,000.00	404,250.00
Field artillery for Organized Militia	727,809.91	1,000,000.00	1,000,000.00	2,100,000.00
Ammunition for Field Artillery, Organized Militia	100,000.00	825,000.00	500,000.00	3,000,000.00
Arming and equipping the militia: Allotment State of Ohio (stores lost in recent floods)		86,003.09		
Exchanging or issuing new pistols, ammunition, etc., Organized Militia	46,637.30			
Total militia	2,296,718.68	2,536,003.09	2,035,000.00	6,854,250.00
Total, military establishment	99,550,002.23	99,727,528.22	95,360,880.38	106,000,634.26
PUBLIC WORKS.				
MILITARY.				
Fortifications and other works of defense.				
Engineer Department:				
Gun and mortar batteries	15,347.15	200,000.00	125,000.00	425,000.00
Fire control at fortifications	102,245.02	200,000.00		25,000.00
Electrical installations at seacoast fortifications		50,000.00	50,000.00	60,000.00
Sites for fortifications and seacoast defenses	3,483.88	150,000.00	100,000.00	
Searchlights for harbor defenses		250,000.00	100,000.00	200,000.00
Preservation and repair of fortifications	146,667.35	300,000.00	200,000.00	200,000.00
Repair and protection of defenses of Pensacola, Fla	38,221.96			
Repair and protection of defenses of Mobile, Ala	97,942.00			
Plans for fortifications	4,312.00	5,000.00	5,000.00	5,000.00
Supplies for seacoast defenses	25,410.84	45,000.00	40,000.00	40,000.00
Sea walls and embankments		30,000.00		40,000.00
Sea wall, Fort Travis, Galveston, Tex	95,000.00			
Preservation and repair of torpedo structures	27,300.68	30,000.00	20,000.00	30,000.00
Casemates, galleries, etc., for submarine mines	15,232.62	35,000.00		35,000.00
Fortifications in insular possessions	746,511.56	1,225,869.00	899,369.00	922,500.00
Repair and protection of defenses of New Orleans, La		16,000.00		
Chief Signal Officer:				
Maintenance, etc., fire-control installations at seacoast defenses	229,779.67	180,000.00	180,000.00	180,000.00
Maintenance, etc., fire-control installations at seacoast defenses, insular possessions	14,091.93	20,000.00	15.000.00	15,000.00
Ordnance Department:				
Armament of fortifications	1,973,121.33	3,268,000.00	2,693,000.00	5,806,800.00
Proving ground, Sandy Hook, N. J	93,147.66	74,900.00	74,900.00	74,900.00
Submarine mines	124,735.16	229,084.00	118,000.00	293,000.00
Fortifications in insular possessions	578,106.00	612,319.00	511,819.00	540,969.00
Submarine mines in insular possessions	3,866.52	78,662.00	76,162.00	10,000.00
Replacing ordnance and ordnance stores destroyed by fire at Benicia Arsenal, Cal				141,230.49
Board of Ordnance and Fortification	15,044.26	10,000.00	10,000.00	25,000.00
Chief of Coast Artillery:				
Fire control in insular possessions	34,619.54			55,000.00
Total	4,384,187.13	7,009,834.00	5,218,250.00	9,124,399.49
Less repayment of funds heretofore reported as expended	39,360.33			
Total fortifications and other works of defense	4,344,826.80	7,009,834.00	5,218,250.00	9,124,399.49

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
PUBLIC WORKS—Continued.				
ARSENALS.				
Ordnance Department:				
Augusta Arsenal, Augusta, Ga				$8,100.00
Benicia Arsenal, Benicia, Cal	$1,970.00	$26,000.00	$21,000.00	8,000.00
Frankford Arsenal, Philadelphia, Pa		55,350.00	4,000.00	88,000.00
Rock Island Arsenal, Rock Island, Ill	20,000.00	273,222.00	250,000.00	96,822.00
Rock Island power plant, Rock Island, Ill	12,126.62	12,500.00	12,500.00	12,500.00
Rock Island bridge, Rock Island, Ill	18,000.00	18,000.00	18,000.00	18,000.00
Springfield Arsenal, Springfield, Mass	5,000.00			
Picatinny Arsenal, Dover, N. J	19,064.45			
Proving ground, Sandy Hook, N. J		32,500.00	32,500.00	
Watertown Arsenal, Watertown, Mass	42,294.86	40,000.00		40,000.00
Testing machines	14,948.64	15,000.00	15,000.00	15,000.00
Watervliet Arsenal, West Troy, N. Y	2,000.00			20,300.00
New York Arsenal, Governors Island, New York Harbor				8,500.00
Ordnance depot, Manila, P. I	8,465.89			
Repairs of arsenals	335,178.91	290,000.00	290,000.00	290,000.00
Total	479,049.37	762,572.00	643,000.00	605,222.00
Less repayment of funds heretofore reported as expended	2.76			
Total arsenals	479,046.61	762,572.00	643,000.00	605,222.00
MILITARY POSTS AND MISCELLANEOUS.				
Quartermaster Corps:				
Military posts	6,213.26	1,505,000.00	140,000.00	920,000.00
Sewerage systems, Fort Monroe, Va	9,424.98	9,424.98	9,291.66	9,691.66
Barracks and quarters, seacoast defenses	10,114.49	320,122.00	115,078.00	41,987.00
Seacoast defenses, Philippine Islands and Hawaii	195,135.37	250,000.00	200,000.00	951,632.44
Army supply depot, Fort Mason, Cal	8,941.12			
Cavalry post, Territory of Hawaii	4,765.94	472,750.00	350,000.00	154,000.00
Electric power plant, Corregidor Island, P. I	95,838.24			
Additional land, Fort Benjamin Harrison, Ind	1,950.00			
Protecting sea wall, Fort Screven, Ga		55,000.00		
Purchase of swamp lands, Fort Washington, Md		350.00	350.00	
Military prison, Fort Leavenworth, Kans	39,857.95			
Military post, Fort Kamehameha, H. T		158,500.00		
Military post, Fort Oglethorpe, Ga		200,000.00		
Instruction building, military post, Fort Leavenworth, Kans			5,000.00	
Land, remount depot, Front Royal, Va				151.00
Water supply, Fort Meade, S. Dak	1,380.56			
Rifle range, Nebraska	24,000.00			
Sea Wall, Fort Moultrie, S. C	8,992.00			
Chief Signal Officer:				
Site for cable office, Seward, Alaska		400.00	400.00	
Engineer Department:				
Fort Riley Military Reservation, Kans	19.32			
Buildings, Engineer School, Washington, D. C		40,000.00		50,000.00
Military structures, Philippine Islands		170,000.00		154,000.00
Total	406,633.23	3,181,546.98	820,119.66	2,281,412.10
Less repayment of funds heretofore reported as expended	74,957.32			
Total, Military Posts and Miscellaneous	331,675.91	3,181,546.98	820,119.66	2,281,412.10
Total, Public Works (Military)	5,155,549.32	10,953,952.98	6,681,369.66	12,011,033.59
PUBLIC WORKS.				
CIVIL.				
Secretary's office:				
Chickamauga and Chattanooga National Park	51,377.78	60,000.00	57,060.00	57,060.00
Shiloh National Military Park	27,022.71	29,000.00	27,000.00	27,000.00
Gettysburg National Park	51,283.83	61,032.00	54,000.00	50,000.00
Vicksburg National Military Park	46,228.79	45,000.00	44,000.00	44,000.00
Commemoration of fiftieth anniversary of battle of Gettysburg	137,042.70			

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
PUBLIC WORKS—Continued.				
CIVIL—continued.				
Engineer Department:				
Improvement of Yellowstone National Park	$133,235.34	$225,000.00	$200,000.00	$280,000.00
Improvement of Crater Lake National Park	38,315.53	100,000.00	75,000.00	100,000.00
Buildings and grounds in and around Washington	281,069.13	385,990.00	342,990.00	388,990.00
Erection of monuments, etc	78,528.55	27,500.00	27,500.00	....
River and harbor improvements under the continuing-contract system	39,981,536.68	12,987,982.00	10,045,795.00	7,217,500.00
Improving rivers and harbors		43,829,010.00	41,073,094.00	34,266,395.00
Rebuilding levees on Mississippi River and tributaries, damaged by floods	1,300,406.56	....	....	....
Protecting banks of Missouri River in Dakota County, Nebr	48,559.13	....	....	....
Total, public works (civil)	42,174,606.73	57,700,514.00	51,946,439.00	42,430,945.00
Total, public works under War Department	47,330,156.05	68,654,466.98	58,627,808.66	54,441,978.59
MISCELLANEOUS.				
NATIONAL CEMETERIES.				
Quartermaster Corps:				
National cemeteries	113,488.00	147,000.00	120,000.00	146,000.00
Pay of superintendents of national cemeteries	62,562.68	63,120.00	63,120.00	63,120.00
Headstones for graves of soldiers	43,246.71	75,000.00	30,000.00	30,000.00
Repairing roads to national cemeteries	8,303.49	12,000.00	12,000.00	12,000.00
Burial of indigent soldiers	1,915.55	3,000.00	3,000.00	3,000.00
Antietam battlefield, preservation	4,811.65	4,500.00	4,500.00	4,500.00
Disposition of remains of officers, soldiers, and civil employees	49,906.65	57,500.00	57,500.00	57,500.00
Bringing home the remains of officers, soldiers, and civil employees	147.55	....	....	....
Confederate Mound, Oakwood Cemetery, Chicago, Ill	250.00	250.00	250.00	250.00
Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark	137.00	....	....	200.00
Monuments or tablets in Cuba and China	511.59	1,000.00	1,000.00	1,000.00
Marking graves of Confederate soldiers who died in northern prisons	1,992.00	....	....	....
Care, etc., of Confederate burial plats	1,091.66	1,250.00	1,250.00	1,250.00
Cave Hill Cemetery, Louisville, Ky., purchase of land	25,000.00	....	....	....
Purchase of Dunkard Church property, Antietam battlefield, Md	....	....	....	1,500.00
Road from Highway Bridge to Arlington National Cemetery, Va	....	11,000.00	....	....
Memorial Amphitheater, Arlington National Cemetery, Va	....	250,000.00	....	....
Road to National Cemetery, Vicksburg, Miss	....	10,000.00	....	....
Road to National Cemetery, Newbern, N. C	....	....	....	15,100.00
Total, national cemeteries	313,364.53	635,620.00	292,620.00	335,420.00
MISCELLANEOUS OBJECTS.				
Adjutant General's Department:				
Collecting military records of Revolutionary War	....	....	25,000.00	....
Quartermaster Corps:				
Relief of Southern Express Co	....	....	....	148.96
Arrears of pay, bounty, etc. (certified claims)	....	200,000.00	25,000.00	50,000.00
Pay, etc., of the Army, War with Spain (certified claims)	....	5,000.00	5,000.00	10,000.00
Medical Department:				
Artificial limbs	102,665.31	85.000.00	85,000.00	275,000.00
Appliances for disabled soldiers	767.82	2,000.00	2,000.00	1,500.00
Trusses for disabled soldiers	2,609.47	4,000.00	4,000.00	3,500.00
Engineer Department:				
Survey of northern and northwestern lakes	122,594.30	150,000.00	125,000.00	175,000.00
Maps, War Department	4,986.47	10,000.00	7,500.00	10,000.00

General object.	Expenditures for the fiscal year ended June 30, 1913.	Estimates for the fiscal year ending June 30, 1914.	Appropriations for the fiscal year ending June 30, 1914.	Estimates for the fiscal year ending June 30, 1915.
PUBLIC WORKS—Continued.				
MISCELLANEOUS OBJECTS—continued.				
Engineer Department—Continued.				
Expenses, California Débris Commission	$8,103.90	$15,000.00	$15,000.00	$15,000.00
Prevention of deposits, harbor of New York	85,280.59	158,260.00	85,260.00	156,260.00
International Waterways Commission	15,091.78	15,000.00	15,000.00	
Preservation of Niagara Falls	2,521.84			
Raising U. S. S. Maine, etc., harbor of Habana, Cuba	7[illegible],139.48			
Reimbursement to Lieut. Col. Mason M. Patrick, Corps of Engineers, U. S. Army				6.90
Reimbursement to Washington C. Bradyhouse				22.00
Reimbursement to certain civilian employees of the Engineer Department at Large, U. S. Army				2,360.95
Board of Managers, National Home for Disabled Volunteer Soldiers:				
National Home for Disabled Volunteer Soldiers	3,837,932.65	4,027,491.00	3,981,265.00	3,976,500.00
State or Territorial homes for disabled soldiers and sailors	1,549,771.16	1,200,000.00	1,200,000.00	1,150,000.00
Miscellaneous items			22,305.40	
Total	5,804,464.77	5,871,751.00	5,597,330.40	5,825,298.81
Less repayment of funds heretofore reported as expended	463.34			
Total, miscellaneous objects	5,804,001.43	5,871,751.00	5,597,330.40	5,825,298.81
Total, miscellaneous	6,117,365.96	6,507,371.00	5,889,950.40	6,160,718.81
RECAPITULATION.				
Civil establishment	1,939,320.50	1,993,998.00	1,949,648.00	1,944,718.00
Military establishment (including support of the Army, Military Academy, and militia)	99,550,002.23	99,727,528.22	95,360,880.38	106,000,634.26
Public works:				
Military	5,155,549.32	10,953,952.98	6,681,369.66	12,011,083.59
Civil	42,174,606.73	57,700,514.00	51,946,439.00	42,430,945.00
Miscellaneous	6,117,365.96	6,507,371.00	5,889,950.40	6,160,718.81
Grand total	154,936,844.74	176,883,364.20	161,828,287.44	168,548,049.66

RECAPITULATION.

General object.	Increase of estimates for 1915 as compared with estimates for 1914.	Decrease of estimates for 1915 as compared with estimates for 1914.	Increase of estimates for 1915 as compared with appropriations for 1914.	Decrease of estimates for 1915 as compared with appropriations for 1914.
Civil establishment		$49,280.00		$4,930.00
Military establishment (including support of the Army, Military Academy, and militia)	$6,273,106.04		$10,639,753.88	
Public works:				
Military (fortifications, arsenals, military posts, etc.)	1,057,080.61		5,329,663.93	
Civil (military parks, buildings, and grounds in and around Washington, and river and harbor improvements)		15,269,569.00		9,515,494.00
Miscellaneous		346,652.19	270,768.41	
Grand total	7,330,186.65	15,665,501.19	16,240,186.22	9,520,424.00
Less increase		7,330,186.65		
Net decrease of estimates for 1915 as compared with estimates for 1914		8,335,314.54		
Less decrease			9,520,424.00	
Net increase of estimates for 1915 as compared with appropriations for 1914			6,719,762.22	

APPENDIX B.

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
CIVIL ESTABLISHMENT.							
Secretary's office:							
Salaries—							
Office of Secretary of War		$149,740.29		$149,740.29	$143,750.00		$5,990.29
Adjutant General's Office		781,950.00		781,950.00	743,063.34		38,886.66
Office of Inspector General		12,560.00		12,560.00	12,558.33		1.67
Office of Judge Advocate General United States Army		25,746.12		25,746.12	24,871.66		874.46
Signal Office		25,800.00		25,800.00	25,640.00		160.00
Office of Quartermaster General		276,095.84		276,095.84	258,400.00		17,695.84
Office of Commissary General		78,072.50		78,072.50	73,450.00		4,622.50
Office of Surgeon General		166,134.50		166,134.50	162,400.00		3,734.50
Office of Paymaster General		72,150.00		72,150.00	67,580.00		4,570.00
Office of Chief of Ordnance		91,760.00		91,760.00	90,083.33		1,676.67
Office of Chief of Engineers		103,290.00		103,290.00	100,966.66		2,323.34
Bureau of Insular Affairs		91,716.33		91,716.33	88,275.00		3,441.33
Contingent expenses, War Department		48,000.00		48,000.00	39,042.87		8,957.13
Stationery, War Department		25,000.00		25,000.00	17,168.05		7,831.95
Rent of buildings, War Department		12,720.00		12,720.00	12,720.00		
Postage to Postal Union countries, War Department		500.00		500.00	150.00		350.00
Statement of receipts and expenditures in Cuba and the Philippine Islands	$454.06			454.06	344.67		109.39
Engineer Department:							
Salaries of employees, public buildings and grounds		78,290.00		78,290.00	78,290.00		
Contingent expenses, public buildings and grounds		3,900.00		3,900.00	3,900.00		
Total civil establishment	454.06	2,043,425.58		2,043,879.64	1,942,653.91		101,225.73
MILITARY ESTABLISHMENT.							
Support of the Army.							
Secretary's office:							
Contingencies of the Army		25,000.00		25,000.00	17,751.51		7,248.49
Office of the Chief of Staff:							
Contingencies, military information section, General Staff Corps		10,000.00		10,000.00	8,172.93		1,827.07
Army War College		9,000.00		9,000.00	8,750.00		250.00
United States service schools		30,000.00		30,000.00	27,263.66		2,736.34
Coast Artillery School, Fort Monroe, Va		28,000.00		28,000.00	27,888.57		111.43

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Support of the Army—Continued.							
The Adjutant General's Department:							
Contingencies, headquarters of military departments		$7,500.00		$7,500.00	$6,023.75		$1,476.25
Chief Signal Officer:							
Signal service of the Army		375,000.00		375,000.00	301,498.66		73,501 34
Washington-Alaska military cable and telegraph system	$91,440.10	50,000.00		141,440.10	114,523.67		26,916.43
Submarine cable, Washington to Alaska	35.77			35.77			35.77
Repairs of deep-sea military cables	21,446.07			21,446.07			21,446.07
Annunciator buzzer systems at target ranges		10,000.00		10,000.00	7,190.63		2,809.37
Quartermaster Corps:							
Pay, etc., of the Army		46,456,432.38		46,456,432.38	45,996,229.81		460,202.57
Mileage to officers and contract surgeons		600,000.00		600,000.00	587,111.63		12,888.37
Subsistence of the Army		9,499,080.57		9,499,080.57	9,398,240.67		100,839.90
Regular supplies, Quartermaster's Department		7,557,773.00		7,557,773.00	7,319,425.74		238,347.26
Replacing regular supplies (act Mar. 23, 1910)	127,088.76			127,088.76	72,719.53		54,369.23
Equipment of officers' schools at military posts		6,000.00		6,000.00	4,451.63		1,548.37
Incidental expenses, Quartermaster's Department		1,886,000.00		1,886,000.00	1,845,813.27		40,186.73
Replacing incidental expenses (act Mar. 23, 1910)	4,077.52			4,077.52	2,787.46		1,290.06
Horses for Cavalry, Artillery, Engineers, etc		400,000.00		400,000.00	383,194.92		16,805.08
Replacing horses for Cavalry, Artillery, Engineers, etc. (act Mar. 23, 1910)	5,672.73		$4,402.17	10,074.90			10,074.90
Barracks and quarters		1,700,000.00		1,700,000.00	[1] *10,000.00* 1,512,180.08		177,819.92
Military post exchanges		41,300.00		41,300.00	30,490.59		10,809.41
Transportation of the Army and its supplies		10,850,000.00		10,850,000.00	9,393,217.07		1,456,782.93
Replacing transportation of the Army and its supplies (act Mar. 23, 1910)	23,590.22		73,240.72	96,830.94			96,830.94
Equipping Army transports with life boats and rafts	300,000.00			300,000.00	67,670.72		232,329.28
Roads, walks, wharves, and drainage		925,350.00		925,350.00	671,238.56		254,111.44
Water and sewers at military posts		[2] *1,000.80* 1,702,595.00		1,703,595.80	1,486,274.26		217,321.54
Barracks and quarters, Philippine Islands	34,590.05	500,000.00		534,590.05	513,194.33		21,395.72
Clothing and camp and garrison equipage		5,000,000.00		5,000,000.00	4,652,254.34		347,745.66
Replacing clothing and camp and garrison equipage (act Mar. 23, 1910)	949,194.80			949,194.80	211,740.25		737,454.55
Construction and repair of hospitals		450,000.00		450,000.00	226,627.40		223,372.60
Quarters for hospital stewards		10,000.00		10,000.00	9,221.83		778.17
Shooting galleries and ranges		93,336.00		93,336.00	75,209.30		18,126.70
Maintenance, Army War College		10,700.00		10,700.00	10,200.00		500.00
Reimbursement to District of Columbia for site acquired for a reformatory		33,000.00		33,000.00	33,000.00		

Rent of buildings, Quartermaster's Department		49,587.00		49,587.00	46,903.59		2,683.41
Army storehouses, Corregidor Island, P. I.	72,692.42			72,692.42	71,816.81		875.61
Bureau of Insular Affairs:							
Care of insane Filipino soldiers		2,000.00		2,000.00	2,000.00		
Care of insane soldiers, Porto Rico Regiment of Infantry		500.00		500.00			500.00
Medical department:							
Medical and hospital department		700,000.00		700,000.00	688,872.42		11,127.58
Replacing medical supplies	79,701.53			79,701.53	12,420.49		67,281.04
Army Medical Museum		5,000.00		5,000.00	4,400.00		600.00
Library, Surgeon General's office		10,000.00		10,000.00	8,354.66		1,645.34
Engineer Department:							
Engineer depots		30,000.00		30,000.00	27,173.43		2,826.57
Engineer School, Washington, D. C.		25,000.00		25,000.00	20,608.48		4,391.52
Engineer equipment of troops		90,000.00		90,000.00	38,585.10		51,414.90
Civilian assistants to engineer officers		40,000.00		40,000.00	36,832.63		3,167.37
Contingencies, engineer department, Philippine Islands		5,000.00		5,000.00	4,133.60		866.40
Ordnance Department:							
Ordnance service		300,118.30		300,118.30	292,157.86		7,960.44
Ordnance stores, ammunition	176,042.10	250,000.00		426,042.10	189,794.37		236,247.73
Small-arms target practice	723,126.61	800.000.00		1,523,126.61	974,710.26		548,416.35
Manufacture of arms	410,994.80	700,000.00		1,110,994.80	827,096.28		283,896.52
Ordnance stores and supplies	409,900.97	700,000.00		1,109,900.97	752,588.98		357,311.99
National trophy and medals for rifle contests		10,000.00		10,000.00	6,770.95		3,229.05
International rifle competition, Camp Perry, Ohio		25,000.00		25,000.00	5,000.00		20,000.00
Automatic rifles	134,837.84	150,000.00		284,837.84	200,468.73		84,369.11
Replacing ordnance and ordnance stores	1,350,671.58		106,932.58	1,457,604.16			1,457,604.16
Total support of the Army	4,915,108.87	[1] *1,000.80* 92,158,272.25	184,575.47	97,258,952.39	[2] *10,000.00* 89,232,247.41		8,016,704.98
Repayments in excess of payments					184,575.47		
Actual expenditures					89,047,671.94		

The account for "Pay of the Army, deposit fund," is not included in the foregoing statement of receipts and expenditures of the "Military establishment (support of the Army)" for the reason that it represents the savings of enlisted men of the Army deposited in the Treasury of the United States, and therefore can not be considered receipts and expenditures of Government funds for maintenance of the Military Establishment. This account appears on the war ledger as follows:

Balance July 1, 1912	$2,795,664.16
Deposited during the fiscal year 1913	1,589,835.51
Total	4,385,499.67
Deposits withdrawn, fiscal year 1913	1,189,163.52
Balance available June 30, 1913	3,196,336.15

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[1] Expenditure by Treasury transfer warrant to credit of "Instruction building, military post, Fort Leavenworth, Kans.," $10,000.

[2] Reappropriation by Treasury transfer warrant from "Water and sewers at military posts, 1912," $1,000.80.

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Military Academy.							
Pay of Military Academy		$728,177.80		$728,177.80	$682,417.09		$45,760.71
Current and ordinary expenses, Military Academy		139,807.00		139,807.00	139,674.72		132.28
Miscellaneous items and incidental expenses, Military Academy		55,080.00		55,080.00	54,929.98		150.02
Buildings and grounds, Military Academy	$303,303.85	251,103.46		554,407.31	363,486.46		190,920.85
Memorial hall, West Point, N. Y	4,000.00			4,000.00			4,000.00
Total Military Academy	307,303.85	1,174,168.26		1,481,472.11	1,240,508.25		240,963.86
Organized Militia.							
Arming and equipping the Militia	582,542.60	2,000,000.00		2,582,542.60	1,764,170.26		818,372.34
New arms and equipments, Organized Militia	51,987.06			51,987.06			51,987.06
Field Artillery, Organized Militia	948,116.85	2,000,000.00		2,948,116.85	727,809.91		2,220,306.94
Exchanging or issuing new pistols, ammunition, etc., Organized Militia	300,000.00			300,000.00	46,637.30		253,362.70
Ammunition for Field Artillery. Organized Militia		600,000.00		600,000.00	100,000.00		500,000.00
Encampment and maneuvers, Organized Militia	63,829.70	1,700,000.00		1,763,829.70	1,237,224.17		526,605.53
Equipment of Coast Artillery armories, Organized Militia		185,000.00		185,000.00	63.43		184,936.57
Arms, uniforms, equipment, etc., Organized Militia		1,097,537.32		1,097,537.32	1,097,537.32		
Total Organized Militia	1,946,476.21	7,582,537.32		9,529,013.53	4,973,442.39		4,555,571.14
Summary military establishment.							
Support of the Army	4,915,103.87	[1] *1,000.80* 92,158,272.25		97,074,376.92	[2] *10,000.00* 89,047,671.94		8,016,704.98
Military Academy	307,303.85	1,174,168.26		1,481,472.11	1,240,508.25		240,963.86
Organized Militia	1,946,476.21	7,582,537.32		9,529,013.53	4,973,442.39		4,555,571.14
Total military establishment	7,168,883.93	[1] *1,000.80* 100,914,977.83		108,084,862.56	[2] *10,000.00* 95,261,622.58		12,813,239.98
PUBLIC WORKS—MILITARY.							
Fortifications.							
Engineer Department:							
Gun and mortar batteries	74,577.45	125,000.00		199,577.45	15,347.15		184,230.30
Fire control at fortifications	242,645.01	100,000.00		342,645.01	102,245.02		240,399.99

Electrical installations at seacoast fortifications	3,280.08	50,000.00	$2,953.68	56,233.76			56,233.76
Sites for fortifications and seacoast defenses	76,685.52	100,000.00		176,685.52	3,483.88		173,201.64
Searchlights for harbor defenses	57,784.43	[1] *25,000.00* 100,000.00		182,784.43	7,061.24		175,723.19
Preservation and repair of fortifications	89,465.77	[1] *125,000.00* 375,000.00		589,465.77	271,667.35		317,708.42
Repair and protection of defenses of Pensacola, Fla	352,859.81		2;786.04	355,645.85	[2] *41,008.00*		314,637.85
Repairs and protection of defenses of Mobile, Ala	98,000.02			98,000.02	[2] *96,000.00* 1,942.00		58.02
Repair and restoration of defenses of Key West, Fla		[1] *36,000.00*		36,000.00	31,295.25		4,704.75
Plans for fortifications		10,000.00		10,000.00	4,312.00		5,688.00
Supplies for seacoast defenses	27,245.00	85,000.00		112,245.00	25,410.84		86,834.16
Sea walls and embankments	7,657.88	[1] *25,000.00*		32,657.88	11,895.35		20,762.53
Preservation and repair of torpedo structures	1,732.02	40,000.00		41,732.02	27,300.68		14,431.34
Casemates, galleries, etc., for submarine mines	35,032.78			35,032.78	15,232.62		19,800.16
Sea wall, Sandy Hook, N. J	12,870.40		639.46	13,509.86			13,509.86
Sea wall, Fort Travis, Galveston, Tex	102,150.00			102,150.00	[2] *65,000.00* 30,000.00		7,150.00
Fortifications in insular possessions	1,034,686.66	1,881,619.00		2,916,305.66	746,511.56		2,169,794.10
Chief Signal Officer:							
Maintenance, etc., fire-control installations at seacoast defenses	75,721.98	360,000.00		435,721.98	229,779.67		205,942.31
Maintenance, etc., fire-control installations at seacoast defenses, insular possessions	157.23	35,000.00		35,157.23	14,091.93		21,065.30
Ordnance Department:							
Armament of fortifications	2,350,021.02	4,708,000.00		7,058,021.02	1,973,121.33		5,084,899.69
Proving ground, Sandy Hook, N. J	39,577.43	155,800.00		195,377.43	93,147.66		102,229.77
Submarine mines	104,006.56	176,000.00		280,006.56	124,735.16		155,271.40
Submarine mines in insular possessions	9,288.74	76,162.00		85,450.74	3,866.52		81,584.22
Replacing and repairing ordnance property at Gulf forts	13,748.18		19.03	13,767.21			13,767.21
Ordnance material (proceeds of sales)	618,991.31	130,840.60		749,831.91	61,616.40		688,215.51
Fortifications in insular possessions	953,555.14	847,904.00		1,801,459.14	578,106.00		1,223,353.14
Under the Chief of Coast Artillery:							
Fire control in insular possessions	229,381.64			229,381.64	34,619.54		194,762.10
Under the Board of Ordnance and Fortification:							
Board of Ordnance and Fortification	105,069.04	35,000.00		140,069.04	15,044.26		125,024.78
Total fortifications	6,716,191.10	[1] *211,000.00* 9,391,325.60	6,398.21	16,324,914.91	[2] *202,008.00* 4,421,833.41		11,701,073.50
Repayments in excess of payments					6,398.21		
Actual expenditures					4,415,435.20		

[1] Reappropriations by Treasury transfer warrants from—

"Repair and protection of defenses of Pensacola, Fla."	$41,008.00
"Repair and protection of defenses of Mobile, Ala."	96,000.00
"Sea wall, Fort Moultrie, S. C."	8,992.00
"Sea wall, Fort Travis, Galveston, Tex."	65,000.00

[2] Expenditures by Treasury transfer warrants to credit of—

"Searchlights for harbor defenses"	$25,000.00
"Preservation and repair of fortifications"	125,000.00
"Sea walls and embankments"	25,000.00
"Repair and restoration of defenses of Key West, Fla."	27,008.00

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—MILITARY—Continued.							
Arsenals.							
Ordnance Department:							
Benicia Arsenal, Benicia, Cal	$6,175.21			$6,175.21	$1,970.00		$4,205.21
Picatinny Arsenal, Dover, N. J.	22,564.45	$3,500.00		26,064.45	19,064.45		7,000.00
Augusta Arsenal, Augusta, Ga.	255.68		$0.29	255.97			255.97
Rock Island Arsenal, Rock Island, Ill.	20,550.76			20,550.76	20,000.00		550.76
Springfield Arsenal, Springfield, Mass.	4,027.73	5,000.00		9,027.73	5,000.00		4,027.73
Watertown Arsenal, Watertown, Mass.	84,781.77			84,781.77	42,294.86		42,486.91
Watervliet Arsenal, West Troy, N. Y.	7,432.02	15,950.00		23,382.02	2,000.00		21,382.02
Rock Island Power Plant, Rock Island, Ill.		12,500.00		12,500.00	12,153.07		346.93
Rock Island Bridge, Rock Island, Ill.		18,000.00		18,000.00	18,000.00		
Testing machine		15,000.00		15,000.00	14,974.71		25.29
Ordnance Depot, Manila, P. I.	10,286.38			10,286.38	8,465.89		1,820.49
Repairs of arsenals		290,000.00		290,000.00	275,820.32		14,179.68
Total arsenals	156,074.00	359,950.00	.29	516,024.29	419,743.30		96,280.99
Repayments in excess of payments					.29		
Actual expenditures					419,743.01		
Military posts, etc.							
Quartermaster Corps:							
Military posts	51,254.11			51,254.11	6,213.26		45,040.85
Military post—							
Fort Sheridan, Ill.	4,612.47			4,612.47		$4,612.47	
Fort Niagara, N. Y.	16,008.42			16,008.42		16,008.42	
Additional land, Fort Sam Houston, Tex.		70,000.00		70,000.00			70,000.00
Military prison, Fort Leavenworth, Kans.	191,109.06			191,109.06	39,857.95		151,251.11
Water system, Schofield Barracks, Hawaii		[1] *175,000.00*		175,000.00	110,400.00		64,600.00
Sewerage system, Fort Monroe, Va.		9,424.98		9,424.98	9,424.98		
Target range—							
Sparta, Wis.	363.44		17.35	330.79			380.79
Fort Oglethorpe, Ga.	5,150.88			5,150.88		5,150.88	
Rifle range, Nebraska	25,000.00			25,000.00	24,000.00	1,000.00	
Army supply depot, Fort Mason, Cal.	9,286.03			9,286.03	8,941.12		344.91
Water supply—							
Fort Meade, S. Dak.	1,529.35			1,529.35	1,380.56	148.79	
Presidio of San Francisco, Cal.	100,000.00			100,000.00			100,000.00
Fort William Henry Harrison, Mont.	9,564.25			9,564.25		9,564.25	

Army hospital, San Juan, Porto Rico	60,000.00			60,000.00			60,000.00
Cold storage and power plant, Fort Bayard, N. Mex	1,072.07			1,072.07		1,072.07	
Additional land, Fort Benjamin Harrison, Ind	3,672.64			3,672.64	1,950.00		1,722.64
Quarters for officers and nurses, Fort Bayard, N. Mex	74.17			74.17		74.17	
Military camp, Pine Plains, N. Y	16.50		120.93	137.43		137.43	
Instruction building, military post, Fort Leavenworth, Kans		[1] *10,000.00*		10,000.00			10,000.00
Cavalry post, Territory of Hawaii	4,766.02			4,766.02	4,765.94		.08
Barracks and quarters, seacoast defenses	14,134.10			14,134.10	10,114.49		4,019.61
Seacoast defenses, Philippine Islands and Hawaii	31,211.56	250,000.00		281,211.56	195,135.37		86,076.19
Engineer Department:							
Fort Riley Military Reservation, Kans	2,737.40			2,737.40	19.32		2,718.08
Fort Crockett Reservation, Galveston, Tex	9,884.50			9,884.50			9,884.50
Enlargement of Governors Island, N. Y			219.04	219.04			219.04
Sea wall, Fort Moultrie, S. C	8,992.00			8,992.00	[2] *8,992.00*		
Electric power plant, Corregidor Island, P. I	154,667.00			154,667.00	95,838.24		58,828.76
Total military posts	705,105.97	[1] *185,000.00* 329,424.98	357.32	1,219,888.27	[2] *8,992.00* 508,041.23	37,768.48	665,086.56
Repayments in excess of payments					357.32		
Actual expenditures					507,683.91		
Summary public works—Military.							
Fortifications	6,716,191.10	**211,000.00* 9,391,325.60		16,318,516.70	***202,008.00* 4,415,435.20		11,701,073.50
Arsenals	156,074.00	359,950.00		516,024.00	419,743.01		96,280.99
Military posts, etc	705,105.97	**185,000.00* 329,424.98		1,219,530.95	***8,992.00* 507,683.91	37,768.48	665,086.56
Total public works, military	7,577,371.07	**396,000.00* 10,080,700.58		18,054,071.65	***211,000.00* 5,342,862.12	37,768.48	12,462,441.05
PUBLIC WORKS—CIVIL.							
Military parks, etc.							
Secretary's Office:							
Chickamauga and Chattanooga National Park	8,007.28	57,060.00		65,067.28	51,377.78		13,689.50
Shiloh National Military Park	512.86	27,000.00		27,512.86	27,022.71		490.15
Gettysburg National Park	349.34	55,000.00		55,349.34	51,283.83		4,065.51
Vicksburg National Military Park	15,131.53	44,000.00		59,131.53	46,228.79		12,902.74
Monuments and markers at Gettysburg	146.09			146.09		146.09	
Quartermaster Corps:							
Commemoration of fitieth anniversary of battle of Gettysburg		150,000.00		150,000.00	137,042.70		12,957.30

[1] Reappropriations by Treasury transfer warrants from—
"Water and sewers at military posts, 1912" $175,000
"Barracks and quarters, 1913" 10,000

[2] Expenditure by Treasury transfer warrant to credit of **"Repair and restoration of defenses of Key West, Fla.," $8,992.**

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Military parks, etc.—Continued.							
Engineer Department:							
Improvement of Crater Lake National Park	$209.51	$50,000.00	....	$50,209.51	$38,315.53	....	$11,893.98
Improvement of Yellowstone National Park	31.58	177,000.00	....	177,031.58	133,235.34	....	43,796.24
Total military parks, etc.	24,388.19	560,060.00	....	584,448.19	484,506.68	$146.09	99,795.42
Funds contributed pursuant to legislation contained in the deficiency act of Aug. 26, 1912 (37 Stat., p. 625), for the following purpose, is not included in the foregoing statement of receipts and expenditures for the reason that it is considered by the War Department as a trust or special fund:							
Funds contributed for commemoration of fiftieth anniversary of battle of Gettysburg:							
Receipts during the fiscal year 1913. $150,000.00							
Expended during the fiscal year 1913. 137,158.89							
Balance on hand June 30, 1913... 12,841.11							
Buildings and grounds in and around Washington.							
Engineer Department:							
Improvement and care of public grounds	....	14,400.00	....	14,400.00	14,400.00	....	....
Improvement and care of public grounds, District of Columbia	....	171,550.00	....	171,550.00	171,492.59	....	57.41
Repairs, fuel, etc., Executive Mansion	....	53,000.00	....	53,000.00	52,978.80	....	21.20
Lighting, etc., Executive Mansion, etc.	....	8,600.00	....	8,600.00	7,577.24	....	1,022.76
Lighting public grounds, District of Columbia	....	18,820.00	....	18,820.00	18,819.50	....	.50
Telegraph to connect the Capitol with the departments and Government Printing Office	....	500.00	....	500.00	500.00	....	....
Repairs to building where Abraham Lincoln died	....	200.00	....	200.00	200.00	....	....
Care and maintenance of Washington Monument	....	11,820.00	....	11,820.00	11,820.00	....	....
Improvements birthplace of Washington, Wakefield, Va.	....	100.00	....	100.00	100.00	....	....
Oil portrait of President Taft	....	4,000.00	....	4,000.00	4,000.00	....	....
Total buildings and grounds in and around Washington	....	282,990.00	....	282,990.00	281,888.13	....	1,101.87

Monuments.

Engineer Department:							
Memorial to—							
General Ulysses S. Grant	45,000.00			45,000.00			45,000.00
Christopher Columbus			$134.00	134.00			134.00
Monument to—							
General Baron Von Steuben	359.61			359.61		359.61	
Commodore John Barry	41,000.00			41,000.00	4,000.00		37,000.00
Commemorate the battle of Princeton, N. J	30,000.00			30,000.00	11,000.00		19,000.00
Generals Screven and Stewart, Midway, Ga		10,000.00		10,000.00			10,000.00
President Tyler, Hollywood Cemetery, Richmond, Va		10,000.00		10,000.00	500.00		9,500.00
Site and pedestal for memorial to Alexander Hamilton	10,000.00			10,000.00			10,000.00
Memorial monuments at—							
Fort Recovery, Ohio	17,500.00			17,500.00	17,500.00		
Germantown, Pa		25,000.00		25,000.00	5,000.00		20,000.00
Monument at Guilford Courthouse, N. C	29,000.00			29,000.00	500.00		28,500.00
Memorial Arch at Valley Forge, Pa	96,753.78			96,753.78	40,000.00		56,753.78
Unveiling statue of John Paul Jones			.42	.42		.42	
Unveiling of Columbus Memorial			37.03	37.03			37.03
Repairs to Chalmette Monument, Chalmette, La		200.00		200.00	200.00		
Total monuments	269,613.39	45,200.00	171.45	314,984.84	78,700.00	360.03	235,924.81
Repayments in excess of payments					171.45		
Actual expenditures					78,528.55		

Funds contributed pursuant to legislation contained in Public act of March 4, 1911 (36 Stat., p. 1352), for the following purpose, is not included in the foregoing statement of receipts and expenditures for the reason that it is considered by the War Department as a trust or special fund:

Funds contributed for memorial monument at Germantown, Pa.:

Receipts during the fiscal year 1913	$25,000
Balance on hand June 30, 1913	25,000

Rivers and harbors.

Engineer Department:							
Breakwater from Mount Desert to Porcupine Island, Me	24,000.00	75,000.00		99,000.00	24,000.00		75,000.00
Improving harbor at—							
Cape Porpoise, Me	7,498.85			7,498.85		7,498.85	
Portland, Me	7,006.44	250,000.00		257,006.44	12,006.44		245,000.00
Rockland, Me	5,000.00			5,000.00	500.00		4,500.00
Improving—							
Boothbay Harbor, Me		18,000.00		18,000.00	18,000.00		
South Bristol Harbor, Me		3,500.00		3,500.00	3,500.00		
Harbor at Sullivan Falls, Me		5,000.00		5,000.00	500.00		4,500.00
Bass Harbor Bar, Me		10,000.00		10,000.00	1,000.00		9,000.00
Carvers Harbor at Vinalhaven, Me		16,000.00		16,000.00	1,000.00		15,000.00
Deer Island Thoroughfare, Me		40,000.00		40,000.00	1,000.00		39,000.00
Pepperells Cove, Me	44,000.00	63,400.00		107,400.00	34,000.00		73,400.00

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Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Improving—Continued.							
Harbor at Rockport, Me.	$25,000.00			$25,000.00	$13,000.00		$12,000.00
Stockton Harbor, Me.	5,000.00			5,000.00			5,000.00
Improving harbor at—							
Isles of Shoals, Me. and N. H.	33,000.00			33,000.00	33,000.00		
St. Albans, Vt.			$3,442.70	3,442.70			3,442.70
Burlington, Vt.	52,500.00	$4,000.00		56,500.00	13,910.54		42,589.46
Gloucester, Mass.	23,903.33			23,903.33	14,703.33		9,200.00
Fall River, Mass.	83,508.21			83,508.21	34,491.82		49,016.39
Nantucket, Mass.	7,500.00	51,312.00		58,812.00	500.00		58,312.00
Boston, Mass.	791,740.49	135,000.00		926,740.49	227,107.65		699,632.84
Lynn, Mass.	7,500.00	119,000.00		126,500.00	26,500.00		100,000.00
Newburyport, Mass.	7,700.00	25,000.00		32,700.00	200.00		32,500.00
Beverly, Mass.	13,485.00			13,485.00	13,485.00		
Hyannis, Mass.		24,000.00		24,000.00	256.26		23,743.74
Plymouth, Mass.		83,500.00		83,500.00			83,500.00
Improving harbors at Plymouth and Provincetown, Mass.	103,000.00			103,000.00	41,500.00		61,500.00
Harbor of refuge at Sandy Bay, Cape Ann, Mass.	203,000.00			203,000.00	23,000.00		180,000.00
Improving Woods Hole Channel, Mass.	40,000.00			40,000.00	22,000.00		18,000.00
Improving Pollock Rip Channel, Mass.		250,000.00		250,000.00	80,344.53		169,655.47
Improving harbors at New Bedford and Fairhaven, Mass.		183,610.00		183,610.00	127,000.00		56,610.00
Improving harbors at Hyannis and Nantucket, Mass.	243.74			243.74	243.74		
Improving Dorchester Bay and Neponset River, Mass.	30,648.45			30,648.45	348.45		30,300.00
Improving harbor at—							
Newport, R. I.	125,984.59			125,984.59	16,627.99		109,356.60
Block Island, R. I.	24,012.23	80,000.00		104,012.23			104,012.23
Great Salt Pond, Block Island, R. I.	30,000.00			30,000.00			30,000.00
Improving entrance to Point Judith Pond, R. I.	8,000.00			8,000.00			8,000.00
Harbor of refuge at Point Judith, R. I.	165,036.70	160,000.00		325,036.70	250,036.70		75,000.00
Improving harbor at—							
Bridgeport, Conn.	75,420.62			75,420.62	239.86		75,180.76
Branford, Conn.	3,300.00	3,000.00		6,300.00	6,296.50		3.50
New Haven, Conn.	6,420.45	163,200.00		169,620.45	25,894.45		143,726.00
Stonington, Conn.	210.22			210.22			210.22
New London, Conn.	13,500.00			13,500.00	11,525.00		1,975.00

Norwalk, Conn	10,039.27			10,039.27	1,000.00		9,039.27
Milford, Conn	2,826.54	5,000.60		7,826.54			7,826.54
Improving harbors at Five-Mile River, Stamford, Southport, Greenwich, and Westport, and Saugatuck River, Conn	12,941.95	20,000.00		32,941.95	1,374.03		31,567.92
Harbor of refuge, Duck Island Harbor, Conn	69,067.03	50,000.00		119,067.03	108,056.53		11,010.50
Breakwater at New Haven, Conn	42,743.46			42,743.46	499.15		42,244.31
Improving harbor at—							
Dunkirk, N. Y	101,520.66			101,520.66			101,520.66
Tarrytown, N. Y			326.58	326.58			326.58
Buffalo, N. Y	136,890.71	457,375.00		594,265.71	104,193.23		490,072.48
Great Sodus Bay, N. Y	23,134.63	4,000.00		27,134.63	6,563.94		20,570.69
Pultneyville, N. Y	759.17		94.07	853.24			853.24
Port Chester, N. Y	7,500.00	25,000.00	66.62	32,566.62			32,566.62
Plattsburg, N. Y	21,000.00	4,000.00		25,000.00	8,455.42		16,544.58
Olcott, N. Y		4,000.00		4,000.00	1,500.00		2,500.00
Larchmont, N. Y	7,000.00		847.25	7,847.25			7,847.25
Echo Bay, N. Y	5,000.25		2,259.49	7,259.74			7,259.74
Saugerties, N. Y		5,000.00	1,897.92	6,897.92			6,897.92
Cape Vincent, N. Y	26,000.00	36,000.00		62,000.00	26,000.00		36,000.00
Oswego, N. Y	65,159.92	195,000.00		260,159.92	14,892.13		245,267.79
Little Sodus Bay, N. Y	31,679.78			31,679.78	3,992.50		27,687.28
Charlotte, N. Y	70,747.10			70,747.10	28,000.00		42,747.10
Mamaroneck, N. Y		29,500.00		29,500.00	1,481.34		28,018.66
Ogdensburg, N. Y	69,531.17	57,970.00		127,501.17	56,985.52		70,515.65
Improving—							
New York Harbor, N. Y	416,647.54	000,000.00		1,016,647.54	174,121.90		842,525.64
Black Rock Harbor, N. Y	1,282,094.52			1,282,094.52	568,440.91		713,653.61
Wallabout Channel, N. Y	4,000.00			4,000.00			4,000.00
Channel in Gowanus Bay, N. Y	290,232.62	300,000.00		590,232.62	219,411.30		370,821.32
Hempstead Harbor, N. Y	18,500.00	5,000.00		23,500.00	10,963.09		12,536.91
Jamaica Bay, N. Y	246,539.11	600,000.00		846,539.11	89,771.09		756,768.02
Sheepshead Bay, N. Y		13,600.00		13,600.00	1,441.13		12,158.87
Great South Bay, N. Y	25,004.45	5,000.00		30,004.45	500.00		29,504.45
Tonawanda Harbor and Niagara River, N. Y	30,272.45			30,272.45			30,272.45
Improving harbors at Port Jefferson, Mattituck, Huntington, Glencove, Flushing Bay, Canarsie Bay, and Sag Harbor, N. Y	27,455.25	289,700.00	446.01	317,601.26			317,601.26
Improving harbors at Rondout and Peekskill, N. Y	3,500.25	16,000.00		19,500.25	6,573.04		12,927.21
Improving—							
Arthur Kill, N. Y. and N. J	117,004.55	580,000.00		697,004.55	65,113.18		631,891.37
Raritan Bay, N. J	2,001.55	30,000.00		32,001.55	1,001.55		31,000.00
Absecon Inlet, N. J		235,000.00		235,000.00	550.00		234,450.00
Keyport Harbor, Matawan Creek, Raritan, South and Elizabeth Rivers, and Shoal Harbor, and Compton Creek, and Cheesequake Creek, N. J	41,502.00	159,443.00		200,945.00	36,371.95		164,573.05
Cold Spring Inlet, N. J	218,503.02			218,503.02	42,500.00		176,003.02
Improving harbor at—							
Pittsburgh, Pa		10,000.00		10,000.00	5,000.00		5,000.00
Erie, Pa	84,263.64			84,263.64	5,000.00		79,263.64
Wilmington, Del	117,043.18	280,000.00		397,043.18	100,043.18		297,000.00
Harbor of refuge, Delaware Bay, Del	8,380.89			8,380.89	8,380.89		

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PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Improving harbor at—							
Baltimore, Md	$17,900.00	$355,250.00		$373,150.00			$373,150.00
Crisfield, Md		5,000.00		5,000.00	$100.00		4,900.00
Improving harbors at Rockhall, Queenstown, Claiborne, and Cambridge, and chester, Choptank, Warwick, Pocomoke, La Trappe, Wicomico, and Manokin Rivers, and Tyaskin Creek, Md	18,900.00	67,510.00		86,410.00	35,400.00		51,010.00
Improving Tilghman Island Harbor, Md		7,820.00		7,820.00	100.00		7,720.00
Improving harbor at—							
Norfolk, Va	137,358.66	706,500.00		843,858.66	529,075.76		314,782.90
Milford Haven, Va		5,000.00		5,000.00	5,000.00		
Cape Charles City, Va	25,250.00			25,250.00	250.00		25,000.00
Beaufort, N. C	7,477.50	10,000.00		17,477.50	8,227.50		9,250.00
Morehead City, N. C	3,392.00	3,000.00		6,392.00	3,892.00		2,500.00
Improving Shallowbag Bay, N. C	3,000.00	1,000.00		4,000.00	1,200.00		2,800.00
Improving Beaufort Inlet, N. C	3,000.00	20,000.00		23,000.00	13,500.00		9,500.00
Harbor of refuge, Cape Lookout, N. C		800,000.00		800,000.00	6,000.00		794,000.00
Improving Winyah Bay, S. C	30.00	382,000.00		382,030.00	137,028.00		245,002.00
Improving harbor at—							
Charleston, S. C	384.59	177,766.00		178,150.59	112,233.83		65,916.76
Savannah, Ga	134,102.14	885,000.00		1,019,102.14	508,786.74		510,315.40
Brunswick, Ga	11,422.69	66,500.00		77,922.69	12,404.69		65,518.00
Improving—							
Channel from Apalachicola River to St. Andrews Bay, Fla	109,077.59	200,000.00		309,077.59	121,855.93		187,221.66
Carrabelle Bar and Harbor, Fla	5,000.00			5,000.00			5,000.00
St. Andrews Bay, Fla	84,049.50			84,049.50	66,292.13		17,757.37
Hillsboro Bay, Fla	265,997.73	650,000.00		915,997.73	175,994.58		740,003.15
Narrows in Santa Rosa Sound, Fla	500.00			500.00			500.00
Sarasota Bay, Fla	7,491.79	26,000.00		33,491.79	10,491.79		23,000.00
Tampa Bay, Fla	10,000.00	18,000.00		28,000.00	10,000.00		18,000.00
Channel from Clearwater Harbor to Tampa Bay, Fla		23,000.00		23,000.00	1,000.00		22,000.00
Charlotte Harbor, Fla		24,000.00		24,000.00	15,000.00		9,000.00
St. Josephs Bay, Fla		30,000.00		30,000.00	10,000.00		20,000.00
Apalachicola Bay, Fla		20,000.00		20,000.00			20,000.00

Improving harbor at—							
Key West, Fla.	588.04	78,000.00		78,588.04	16,588.04		62,000.00
Pensacola, Fla.	56,055.59			56,055.59	941.38		55,114.21
Fernandina, Fla.	8,397.66	55,000.00		63,397.66	2,000.00		61,397.66
Miami, Fla.		100,00.00		100,000.00			100,000.00
St. Petersburg, Fla.		33,500.00		33,500.00			33,500.00
Mobile, Ala.	156,595.67	688,000.00		844,595.67	494,234.09		350,361.58
Improving channel connecting Mobile Bay and Mississippi Sound, Ala.		70,000.00		70,000.00			70,000.00
Improving Lake Pontchartrain and Pass Manchac, La.	5,000.00			5,000.00			5,000.00
Improving harbor at—							
Biloxi, Miss.		9,000.00		9,000.00	4,000.00		5,000.00
Gulfport, Miss.	70,979.83	287,000.00		357,979.83	53,479.83		304,500.00
Pascagoula, Miss.		110,000.00		110,000.00			110,000.00
Improving—							
Horn Island Pass, Miss.	3,500.00	7,000.00		10,500.00	3,500.00		7,000.00
Houston Ship Channel, Tex.	300,000.00			300,000.00	289,996.75		10,003.25
Channel from Pass Cavalo to Port Lavaca, Tex.	300.52	5,000.00		5,300.52			5,300.52
Galveston Ship Channel and Buffalo Bayou, Tex.	32,393.54			32,393.54	2,499.40		29,894.14
Channel from Galveston Harbor to Texas City, Tex.	4,501.80	600,000.00		604,501.80	69,878.41		534,623.39
Channel to Port Bolivar, Tex.	.35	75,000.00		75,000.35	14,999.90		60,000.45
West Galveston Bay Channel and adjacent streams, Tex.	21,425.00	50,000.00		71,425.00	16,000.00		55,425.00
Sabine Pass, Tex.	71,199.50	833,800.00		904,999.50	237,009.00		667,990.50
Channel from Aransas Pass to Corpus Christi, Tex.	16,403.00	10,000.00		26,403.00	16,403.00		10,000.00
Improving harbor at—							
Galveston, Tex.	349,357.28	375,000.00		724,357.28	152,036.92		572,320.36
Cleveland, Ohio	455,684.17	225,000.00		680,684.17	185,035.05		495,649.12
Ashtabula, Ohio	210,980.43	200,000.00		410,980.43	294,963.30		116,017.13
Lorain, Ohio	140,499.34			140,499.34	2,438,26		138,061.08
Sandusky, Ohio	90,528.08			90,528.08	30,491.48		60,036.60
Huron, Ohio	22,546.27			22,546,27	11,274.38		11,271.89
Conneaut, Ohio	118,241.10	300,000.00		418,241.10	141,896.13		276,344.97
Fairport, Ohio	104,589.33	45,000.00		149,589.33	27,993.95		121,595.38
Toledo, Ohio	108,179.52	180,000.00		288,179.52	149,484.07		138,695.45
Port Clinton, Ohio		1,000.00		1,000.00	300.00		700.00
Michigan City, Ind.	50,000.00	10,000.00		60,000.00	17,312.40		42,687.60
Improving Indiana Harbor, Ind.		250,000.00		250,000.00	3,000.00		247,000.00
Improving harbor at—							
Calumet, Ill.	98,009.56			98,009.56	43,504.00		54,505.56
Chicago, Ill.	255,494.74	590,000.00		845,494.74	15,499.40		829,995.34
Waukegan, Ill.	6,025.00	23,500.00		29,525.00	14,927.52		14,597.48
Harbor of refuge, Keweenaw Point, Mich.	35,000.00			35,000.00	5,000.00		30,000.00
Improving harbor at—							
Cheboygan, Mich.	8,781.72	14,000.00		22,781.72	2,000.00		20,781.72
Manistique, Mich.	215,033.36			215,033.36	69,994.00		145,039.36
Muskegon, Mich.	15,500.00			15,500.00	5,500.00		10,000.00
Ontonagon, Mich.	4,900.00	9,000.00		13,900.00	9,500.00		4,400.00
Grand Haven, Mich.	44,000.00			44,000.00			44,000.00
South Haven, Mich.	15,118.41	46,000.00		61,118.41	54,528.02		6,590.39
Holland, Mich.	21,500.00			21,500.00	5,500.00		16,000.00
Manistee, Mich.	12,000.00	462,000.00		474,000.00	20,500.54		453,499.46
Petoske, Mich.	16,514.47			16,514.47			16,514.47
Saugatuck and Kalamazoo River, Mich.	2,500.00	12,000.00		14,500.00	2,500.00		12,000.00

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PUBLIC WORKS—CIVIL—Continued.							
***Rivers and harbors*—Continued.**							
Engineer Department—Continued.							
Improving harbor at—Continued.							
Ludington, Mich	$152,744.11	$56,500.00		$209,244.11	$49,804.43		$159,439.68
Frankfort, Mich	8,000.00	3,000.00		11,000.00	5,000.00		6,000.00
Charlevoix, Mich	8,000.00			8,000.00			8,000.00
Marquette, Mich	160,451.60			160,451.60	50,015.81		110,435.79
Gladstone, Mich	6,467.24			6,467.24		$6,467.24	
Alpena, Mich	14,500.00			14,500.00	14,500.00		
Arcadia, Mich	1,500.00	35,000.00		36,500.00	4,999.75		31,500.25
Improving Mackinac Harbor, Mich		35,000.00		35,000.00	35,000.00		
Harbor of refuge at—							
Marquette Bay, Mich	4,199.42	5,000.00		9,199.42	500.00		8,699.42
Harbor Beach, Mich	24,201.76			24,201.76	6,500.00		17,701.76
Grand Marias, Mich	39,282.82	20,000.00		59,282.82	31,000.00		28,282.82
Portage Lake, Mich	1,998.82	3,000.00		4,998.82	4,998.82		
Improving—							
St. Joseph Harbor and River, Mich	22.72	21,500.00		21,522.72	6,000.00		15,522.72
Menominee Harbor and River, Mich. and Wis	2,518.21	33,000.00		35,518.21	6,920.37		28,597.84
Warroad Harbor and River, Minn	113.18	15,200.00		15,313.18	4,123.66		11,189.52
Improving harbor at—							
Agate Bay, Minn	4,929.05			4,929.05	500.00		4,429.05
Grand Marias, Minn	7,399.43			7,399.43	500.00		6,899.43
Improving Zippel Bay, Lake of the Woods, Minn	8,624.51	1,000.00		9,624.51	6,089.86		3,534.65
Improving Lake Traverse, Minn. and S. Dak		7,510.00		7,510.00	504.14		7,005.86
Improving harbor at—							
Duluth, Minn., and Superior, Wis	190,569.66	525,280.00		715,849.66	177,785.79		538,063.87
Milwaukee, Wis	118,004.52			118,004.52	5,152.36		112,852.16
Manitowoc, Wis	42,673.04			42,673.04	1,000.00		41,673.04
Kewaunee, Wis	46,100.61	16,000.00		62,100.61	10,500.00		51,600.61
Oconto, Wis	21,956.51			21,956.51	4.80		21,951.71
Port Wing, Wis	1,899.43	20,000.00		21,899.43			21,899.43
Port Washington, Wis	1,500.00	7,000.00		8,500.00			8,500.00
Sheboygan, Wis	8,671.13	364,000.00		372,671.13	45,000.00		327,671.13
Racine, Wis	165,193.79			165,193.79	109,923.53		55,270.26
Two Rivers, Wis	2,783.00	11,500.00		14,283.00	2,500.00		11,783.00
Ashland, Wis	18,281.00	60,000.00		78,281.00	26,000.00		52,281.00
Depere, Wis	1,000.00			1,000.00			1,000.00

Green Bay, Wis	260.78	46,000.00		46,260.78	11,931.84		34,318.94
Kenosha, Wis	14,004.30	39,000.00		53,004.30	21,000.00		32,004.30
Algoma, Wis	23,064.96			23,064.96	813.88		22,251.08
Sturgeon Bay and Lake Michigan Ship Canal	30,000.00			30,000.00		30,000.00	
Improving harbor at—							
Ahnapee, Wis		177.21		177.21	177.21		
San Luis Obispo, Cal	74,396.87			74,396.87	65,466.64		8,932.23
San Pedro, Cal	67,807.80			67,807.80	30,000.00		37,807.80
San Diego, Cal	515.39	243,786.00		244,301.39	500.00		243,801.39
San Francisco, Cal	15,400.00			15,400.00	14,995.00		405.00
Oakland, Cal	191,328.12	405,000.00		596,328.12	152,226.52		444,101.60
Monterey, Cal		200,000.00		200,000.00			200,000.00
Improving—							
Los Angeles Harbor, Cal	133,041.50	473,250.00		606,291.50	222,000.00		384,291.50
Humboldt Harbor and Bay, Cal	147,018.77	270,000.00		417,018.77	342,194.18		74,824.59
San Pablo Bay, Cal	331,862.27	162,000.00		493,862.27	301,892.82		191,969.45
Suisun Channel, Cal	10,250.00	14,500.00	$1,944.29	26,694.29			26,694.29
Nehalem Bay, Oreg		200,000.00		200,000.00	10,000.00		190,000.00
Tillamook Bay and Bar, Oreg		205,000.00		205,000.00	1,318.47		203,681.53
Improving harbor at—							
Coos Bay, Oreg	357,993.48	80,000.00		437,993.48	313,423.42		124,570.06
Bellingham, Wash	27,001.75	52,250.00		79,251.75	78,238.47		1,013.28
Olympia, Wash	16,000.00			16,000.00	10,002.87		5,997.68
Tacoma, Wash	91,499.30			91,499.30			91,499.30
New Whatcom, Wash	2,326.02			2,326.02	2,326.02		
Improving Grays Harbor and Chehalis River, Wash	12,492.04	30,000.00		42,492.04	16,994.00		25,498.04
Improving Grays Harbor, Wash	740.44	655,000.00		655,740.44	275,995.53		379,744.91
Improving Kahului Harbor, Hawaii	100,001.50	100,000.00		200,001.50	130,001.50		70,000.00
Improving harbor at—							
Hilo, Hawaii	220,000.00	176,000.00		396,000.00	19,997.50		376,002.50
Honolulu, Hawaii		225,000.00	183.67	225,183.67			225,183.67
San Juan, Porto Rico	25,000.00			25,000.00	5,589.42		19,410.58
Improving—							
Sasanoa River, Me	9,000.00			9,000.00			9,000.00
Saco River, Me	30,000.00			30,000.00	13,000.00		17,000.00
St. Croix River, Me	67,500.00	75,000.00		142,500.00	47,000.00		95,500.00
Kennebec River, Me	5,217.72	30,500.00		35,717.72	2,963.79		32,753.93
Penobscot River, Me	52,500.00			52,500.00	32,500.00		20,000.00
Medomak River, Me		17,000.00		17,000.00	1,000.00		16,000.00
Cocheco River, N. H	4,711.00			4,711.00		4,711.00	
Narrows of Lake Champlain, N. Y. and Vt	1.50	12,000.00		12,001.50	4,887.55		7,113.95
Merrimack River, Mass	1,501.98	10,000.00		11,501.98	501.98		11,000.00
Weymouth River, Mass	101,000.15			101,000.15	33,000.00		68,000.15
Taunton River, Mass	9,947.10			9,947.10	100.00		9,847.10
Mystic and Malden Rivers, Mass	13,479.35	155,000.00		168,479.35	10,179.35		158,300.00
Providence River and Harbor, R. I	81,526.23	368,800.00		450,326.23	190,526.23		259,800.00
Pawtucket River, R. I	12,031.88			12,031.88	7,031.88		5,000.00
Pawcatuck River, R. I. and Conn	10,130.67	6,000.00		16,130.67	12,130.67		4,000.00
Connecticut River between Hartford, Conn., and Holyoke, Mass	4,418.27		470.36	4,888.63		4,888.63	
Thames River, Conn	10,004.54	12,000.00		22,004.54	10,004.54		12,000.00
Connecticut River, Conn	77,876.45	80,000.00		157,876.45	52,374.49		105,501.96

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Improving—Continued.							
Housatonic River, Conn.	$4,051.12	$30,000.00		$34,051.12	$9,978.60		$24,072.52
Mystic River, Conn.	147.16	11,660.00		11,807.16	4,646.16		7,161.00
Bronx River and East Chester Creek, N. Y.	18,000.00	10,000.00		28,000.00	13,355.89		14,644.11
Harlem River, N. Y.	122,434.00	130,000.00		252,434.00	13,190.95		239,243.05
Hudson River, N. Y.	1,910,146.83	1,000,000.00		2,910,146.83	708,000.21		2,202,146.62
Niagara River, N. Y.	8.86	27,562.50		27,571.36			27,571.36
Bronx River, N. Y.		130,000.00	$0.50	130,000.50			130,000.50
East Chester Creek, N. Y.		20,000.00		20,000.00			20,000.00
Browns Creek, N. Y.		10,000.00		10,000.00	174.69		9,825.31
Wappinger Creek, N. Y.		3,500.00	62.11	3,562.11			3,562.11
Removing obstructions in East River and Hell Gate, N. Y.	648,002.10	350,000.00		998,002.10	147,458.51		850,543.59
Improving—							
Newton Creek, N. Y.	20,004.75	45,000.00		65,004.75	20,085.73		44,919.02
West Chester Creek, N. Y.	32,781.00	12,000.00		44,781.00	32,585.25		12,195.75
Passaic River, N. J.	215,087.68	343,000.00		558,087.68	15,037.28		543,050.40
Shrewsbury River, N. J.	10,002.37	20,000.00		30,002.37	15,002.37		15,000.00
Cohansey River, N. J.	13,000.00	3,500.00		16,500.00	3,500.00		13,000.00
Absecon Creek, N. J.		16,000.00		16,000.00	13,650.00		2,350.00
Alloway Creek, N. J.		8,000.00		8,000.00	3,000.00		5,000.00
Mantua Creek, N. J.	26,500.00	18,000.00		44,500.00	25,500.00		19,000.00
Oldmans Creek, N. J.	45,000.00			45,000.00	150.00		44,850.00
Cooper Creek, N. J.		10,000.00		10,000.00	5,000.00		5,000.00
Hackensack River, N. J.		100,000.00		100,000.00	14,999.50		85,000.50
Salem River, N. J.		20,000.00		20,000.00	5,000.00		15,000.00
Woodbury Creek, N. J.		38,000.00		38,000.00			38 000.00
Tuckerton Creek, N. J.		5,000.00		5,000.00			5,000.00
Maurice River, N. J.		50,000.00		50,000.00	8,500.00		41,500.00
Raccoon Creek, N. J.		17,000.00		17,000.00	4,100.00		12,900.00
Toms River, N. J.		2,000.00		2,000.00			2,000.00
Woodbridge Creek, N. J.		9,000.00		9,000.00	6,000.00		3,000.00
Delaware River, Pa. and N. J.	365,766.05	3,754,000.00		4,119,766.05	1,420,301.90		2,699,464.15
Monongahela River, Pa.	24,768.76	178,200.00		202,968.76	29,997.63		172,971.13
Allegheny River, Pa.	1,998.79	302,000.00		303,998.79	999.40		302,999.39
Youghiogheny River, Pa.	86,491.50			86,491.50			86,491.50
Dam at Herr's Island, Allegheny River near Pittsburgh, Pa.	27,581.16			27,581.16	9,000.00		18,581.16

Reservoirs at headwaters of Allegheny, Monongahela, and Ohio Rivers and tributaries		5,000.00		5,000.00	2,293.86		2,706.14
Improving—							
Appoquinimink, Murderkill, and Mispilion Rivers, Del.	1,900.00	39,500.00		41,400.00	13,550.00		27,850.00
St. Jones River, Del.	36,700.00	5,000.00		41,700.00	8,000.00		33,700.00
Smyrna River, Del.	40,000.00			40,000.00			40,000.00
Leipsic River, Del.	8,942.00	24,600.00		33,542.00	9,250.00		24,292.00
Little River, Del.		15,000.00		15,000.00	5,600.00		9,400.00
Broad Creek River, Del.		16,520.00		16,520.00	14,520.00		2,000.00
Broadkill River, Del.		10,000.00		10,000.00			10,000.00
Inland waterway between Rehoboth Bay and Delaware Bay, Del.		91,725.00		91,725.00	1,350.00		90,375.00
Nanticoke River, Del. and Md.		8,600.00		8,600.00	5,000.00		3,000.00
Elk and Little Elk Rivers, Md.		4,040.00		4,040.00	4,040.00		
Lower Thoroughfare, Deal Island, Md.		2,000.00		2,000.00	2,000.00		
Twitch Cove and Big Thoroughfare Rivers, Md.		2,900.00		2,900.00	2,900.00		
Broad Creek, Md.		57,200.00		57,200.00	100.00		57,100.00
Corsica River, Md.		5,368.00		5,368.00	5,368.00		
Slaughter Creek, Md.		4,140.00		4,140.00	4,140.00		
Tred Avon River, Md.		9,200.00		9,200.00	9,200.00		
Tuckahoe River, Md.		15,600.00		15,600.00	100.00		15,500.00
Susquehanna River near Havre de Grace, Md.		51,230.00		51,230.00			51,230.00
Patapsco River, Md.	154,479.89			154,479.89	24,835.77		129,644.12
Potomac River	49,012.25	73,000.00		122,012.25	21,012.25		101,000.00
Anacostia River, D. C., trust fund, acquisition of land from sundry owners subject to order of Supreme Court, District of Columbia		4,518.19		4,518.19	4,518.19		
Anacostia River, D. C.	145,000.00	125,000.00		270,000.00	115,000.00		155,600.00
Rappahannock River, Va.		30,000.00		30,000.00	5,000.00		25,000.00
Appomattox River, Va.	29,493.00			29,493.00	993.00		28,500.00
Nansemond River, Va.	7,300.00			7,300.00	800.00		6,500.00
James River, Va.	173,000.00	145,000.00		318,000.00	158,000.00		160,000.00
York, Mattaponi, and Pamunkey Rivers, and Occoquan, Lower Machodoc, Nandua, Aquia, and Carters Creeks, Va.	15,000.00	46,400.00		61,400.00	34,900.00		26,500.00
Onancock River, Va.		1,000.00		1,000.00			1,000.00
Upper Machodoc Creek, Va.		3,200.00		3,200.00			3,200.00
Blackwater River, Va.	4,400.00			4,400.00			4,400.00
Pagan River, Va.		2,000.00		2,000.00	100.00		1,900.00
Nomini Creek, Va.	3,500.00			3,500.00	3,500.00		
Urbana Creek, Va.	6,500.00			6,500.00	3,500.00		3,000.00
Inland waterway from Norfolk, Va., to Beaufort Inlet, N. C.		1,400,000.00		1,400,000.00	515,035.00		884,965.00
Big Sandy River, W. Va. and Ky.	96,550.91			96,550.91	3,121.85		93,429.06
Great Kanawha River, W. Va.	5,000.00			5,000.00	5,000.00		
Monongahela River, W. Va.	58,429.81			58,429.81		$58,429.81	
Guyandot River, W. Va.	1,000.80			1,000.80			1,000.80
Waterway from Norfolk Harbor, Va., to Albemarle Sound, N. C.	3,500.00	3,000.00		6,500.00	2,500.00		4,000.00
Waterway from Norfolk, Va., to sounds of N. C.	4,500.00			4,500.00	500.00		4,000.00
Waterway from Pamlico Sound to Beaufort Inlet, N. C.	8,000.00	2,000.00		10,000.00	2,750.00		7,250.00
Improving New River and waterways to Beaufort, N. C.	13,150.00	12,500.00		25,650.00	14,500.00		11,150.00
Improving Neuse and Trent Rivers, N. C.	33.30	22,000.00		22,033.30	14,551.61		7,481.69

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Waterway connecting Swan Quarter Bay and Deep Bay, N. C.	$5,900.00			$5,900.00	$1,400.00		$4,500.00
Improving—							
Roanoke River, N. C.	4,000.00			4,000.00	2,300.00		1,700.00
Scuppernong River, N. C.	2,000.00	$2,000.00		4,000.00	1,199.00		2,801.00
Cape Fear River, N. C.	275,583.37	652,940.00		928,523.37	336,519.37		592,004.00
Meherrin River, N. C.	2,000.00			2,000.00	200.00		1,800.00
South River, N. C.	10,000.00			10,000.00			10,000.00
Smiths Creek, N. C.	15,250.00			15,250.00	15,250.00		
Bay River, N. C.		2,000.00		2,000.00	500.00		1,500.00
Contentnia Creek, N. C.		2,000.00		2,000.00	2,000.00		
Fishing Creek, N. C.		3,000.00		3,000.00	500.00		2,500 00
Northeast, Black, and Cape Fear Rivers, N. C.		24,000.00		24,000.00	13,500.00		10,500.00
Pamlico and Tar Rivers, N. C.		100,000.00		100,000.00	38,501.60		61,498.40
Swift Creek, N. C		1,000.00		1,000.00	500.00		500.00
Shallotte River, N. C.		9,845.00		9,845.00			9,845.00
Waterways connecting Core Sound and Beaufort Harbor, N. C.		20,000.00		20,000.00			20,000.00
Waccamaw and Little Pedee Rivers, N. C. and S. C.	10,000.00	55,000.00		65,000.00	7,845.00		57,155.00
Santee, Wateree, and Congaree Rivers, S. C.	59,979.10	124,000.00		183,979.10	61,767.59		122,211.51
Great Pedee River, S. C.	10,010.00	25,000.00		35,010.00	28,754.04		6,255.96
Archers Creek, S. C.		25,000.00		25,000.00	5,000.00		20,000.00
Waterways between Charleston and Alligator Creek, S. C.	35,000.00	40,000.00		75,000.00	36,000.00		39,000.00
Mingo Creek, S. C.		22,000.00		22,000.00	10,006.71		11,993.29
Altamaha, Oconee, and Ocmulgee Rivers, Ga.	14,019.25	80,000.00		94,019.25	47,244.25		46,775.00
Flint River, Ga.	3,500.00	25,000.00		28,500.00	15,500.00		13,000.00
Fancy Bluff Creek, Ga.		8,000.00		8,000.00	500.00		7,500.00
Savannah River, Ga.	115,683.60	296,470.00		412,153.60	189,353.00		222,800.60
Coosa River, Ga. and Ala.	160,685.40	280,000.00		440,685.40	172,767.26		267,918.14
Cowhead River, Ga.		3,000.00		3,000.00	3,000.00		
Satilla River, Ga.		20,000.00		20,000.00	2,000.00		18,000.00
St. Marys River, Ga. and Fla.		19,450.00		19,450.00	16,500.00		2,950.00
Chattahoochee River, Ga. and Ala.		130,000.00		130,000.00	65,170.31		64,829.69
Waterway between Savannah, Ga., and Fernandina, Fla.	29,000.00	140,000.00		169,000.00	4,000.00		165,000.00

Channel between St. Johns River and Cumberland Sound, Ga. and Fla.		50,000.00		50,000.00	500.00		49,500.00
Anclote River, Fla.	225.00			225.00			225.00
Apalachicola River, Fla.	100.00	19,000.00		19,100.00	12,600.00		6,500.00
St. Johns River, Fla.	61,431.11	1,301,800.00		1,363,281.11	645,097.80		718,183.31
Caloosahatchee River, Fla.		7,000.00		7,000.00	5,000.00		2,000.00
Crystal River, Fla.		4,000.00		4,000.00			4,000.00
Holmes River, Fla.		4,500.00		4,500.00	1,200.00		3,300.00
Manatee River, Fla.		10,000.06		10,000.00			10,000.00
Withlacoochee River, Fla.		43,000.00		43,000.00	35,000.00		8,000.00
St. Lucie Inlet, Fla.		100,000.00		100,000.00			100,000.00
Lake Crescent and Dunns Creek, Fla.		25,000.00		25,000.00	500.00		24,500.00
Indian River, Fla.		22,000.00		22,000.00	500.00		21,500.00
Orange River, Fla.		1,000.00		1,000.00			1,000.00
Hillsboro River, Fla.	17,000.00			17,000.00			17,000.00
Oklawaha River, Fla.	16,000.00	15,000.00		31,000.00			31,000.00
Removing the water Hyacinth, Fla., Tex., and La.	43,484.74			43,484.74	16,985.00		26,499.74
Removing the water Hyacinth		15,000.00		15,000.00	5,015.00		9,985.00
Improving—							
Kissimmee River, Fla.	2,000.00			2,000.00			2,000.00
Choctawhatchee River, Fla. and Ala.		17,000.00		17,000.00	8,000.00		9,000.00
Escambia and Conecuh Rivers, Fla. and Ala.	898.76	13,000.00		13,898.76	6,898.76		7,000.00
Alabama River, Ala.	6,457.44	175,000.00		181,457.44	68,723.23		112,734.21
Tombigbee River, Ala.	7,500.00	45,500.00		53,000.00	18,500.00		34,500.00
Black Warrior, Warrior, and Tombigbee Rivers, Ala.	817,000.00	1,803,500.00		2,620,500.00	847,037.71		1,773,462.29
Pascagoula, Chickasahay, and Leaf Rivers, Miss.	197.64	14,000.00		14,197.64	2,197.64		12,000.00
East Pearl River, Miss.	7,500.00			7,500.00			7,500.00
Pascagoula River, Miss.	985.46	20,000.00		20,985.46	20,485.46		500.00
Pearl River, Miss.	6,491.38	52,000.00		58,491.38	13,502.06	$4,191.38	40,797.94
Yazoo River and tributaries, Miss.	9,100.00	80,000.00		89,100.00	37,004.41		52,095.59
Big Sunflower River, Miss.		195,000.00		195,000.00	75,014.71		119,985.29
Wolf and Jordan Rivers, Miss.		10,000.00		10,000.00	2,000.00		8,000.00
Mississippi River	1,046,746.21	12,230,000.00		13,276,746.21	4,929,165.19		8,347,581.02
Mississippi River from mouth of Ohio River to Minneapolis, Minn.	370,195.35	5,135,000.00		5,505,195.35	2,252,407.24		3,252,788.11
Reservoirs at headwaters of Mississippi River	104,369.09	15,000.00		119,369.09	19,111.18		100,257.91
Board on examination and survey of Mississippi River	10,593.28			10,593.28		10,593.28	
Improving Southwest Pass, Mississippi River	473,829.37	950,000.00		1,423,829.37	638,477.76		785,351.61
Experimental towboats for Mississippi River and tributaries	484,802.36			484,802.36	10,023.31		474,779.05
Improving Mississippi River between Brainerd and Grand Rapids, Minn.	3,893.27			3,893.27	3,509.84		383.43
Waterway from Lockport, Ill., to Mississippi River	1,018,022.52			1,018,022.52	18,022.52		1,000,000.00
Maintenance of South Pass Channel, Mississippi River	47,981.07	100,000.00		147,981.07	110,202.61		37,778.46
Gauging waters of the Mississippi River and its tributaries		9,600.00		9,600.00	8,700.00		900.00
Examinations and surveys at South Pass, Mississippi River		10,000.00		10,000.00	10,000.00		
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers		100,000.00		100,000.00	100,000.00		
Operating snag and dredge boats on Upper Mississippi, Illinois, and Minnesota Rivers		25,000.00		25,000.00	25,000.00		
Maintaining and protecting levees of Mississippi River and tributaries against floods	175,000.00		$20,866.59	195,866.59		195,850.59	16.00

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Rebuilding levees on Mississippi River and tributaries damaged by floods	$1,350,000.00			$1,350,000.00	$1,300,406.56		$49,593.44
Improving—							
Red River, La. and Ark	29,457.92	$242,000.00		271,457.92	81,542.63		189,915.29
Calcasieu River and Pass, La	6,000.00			6,000.00	1,000.00		5,000.00
Bogue Chitto, Bogue Falia, Bayou Manchac, Amite, Chefuncte, and Tickfaw Rivers, La	3,000.00	7,000.00		10,000.00	2,900.40		7,099.60
Bayou Plaquemine, La	19,404.29			19,404.29	8,494.29		10,910.00
Bayou Teche, La	59,783.80	100,000.00		159,783.80	129,787.55		29,996.25
Waterway from Franklin to Mermentau, La	207,500.00			207,500.00	54,993.50		152,506.50
Atchafalaya River, La	37,500.00			37,500.00	3,500.00		34,000.00
Bayou Bartholomew, Macon, D'Arbonne, and Corney and Boeuf and Tensas Rivers, La	1,000.00	28,000.00		29,000.00	8,000.00		21,000.00
Bayou La Fourche, La	1,000.00	2,000.00		3,000.00	500.00		2,500.00
Bayou Terrebonne, La	25,000.00			25,000.000	5,000.00		20,000.00
Bayou Grossetete, La		18,000.00		18,000.00	15,000.00		3,000.00
Johnsons Bayou, La		5,000.00		5,000.00	2,100.00		2,900.00
Bayou Queue de Tortue, La		26,000.00		26,000.00	20,000.00		6,000.00
Bayou Vermillion and Mermentau River, La		21,200.00		21,200.00	4,000.00		17,200.00
Waterway between Jefferson, Tex., and Shreveport, La	90,249.57			90,249.57	35,249.57		55,000.00
Inland waterway from Mermentau River to Sabine River, La. and Tex	95,992.95	290,000.00		385,992.95	992.95		385,000.00
Improving—							
Mouth of Brazos River, Tex	3.26	150,000.00		150,003.26	21,999.10		128,004.16
Brazos River, Tex	63,964.84	490,000.00		553,964.84	231,725.70		322,239.14
Inland waterway on coast of Texas	130,289.33	162,000.00		292,289.33	178,017.60		114,271.73
Sabine-Neches Canal, Tex	165,500.00	35,000.00		200,500.00	124,160.80		76,339.20
Cypress bayou, Tex. and La		5,500.00		5,500.00	5,009.50		490.50
Trinity River, Tex	122,330.65	710,000.00		832,330.65	382,820.47		449,510.18
Port Aransas, Tex		600,000.00		600,000.00			600,000.00
Aransas Pass and Bay, Tex	16,687.78	250,000.00		266,687.78	229,978.34		36,709.44
Sabine and Neches Rivers, Tex	64,668.50			64,668.50	14,571.83		50,096.67
Sulphur River, Tex. and Ark	3,500.00			3,500.00	3,500.00		
Arkansas River, Ark	419,642.67	138,000.00		557,642.67	174,734.84		382,907.83
Ouachita River, Ark. and La	291,976.15	370,000.00		661,976.15	489,577.51		172,398.64
Upper White River, Ark	309.02			309.02		$309.02	

Cache River, Ark	435.02	5,000.00		5,435.02	5,345.26		89.76
St. Francis River, Ark	1,480.83	16,000.00		17,480.83	8,912.23		8,568.10
White River, Ark	6,907.81	38,000.00		44,907.81	22,990.20		21,917.61
Sabine River, Ark		6,000.00		6,000.00	3,500.00		2,500.00
White River at Devall Bluff, Ark		8,000.00		8,000.00			8,000.00
Black and Current Rivers, Ark. and Mo	1,683.35	40,000.00		41,683.35	18,978.97		22,704.38
Cumberland River above Nashville, Tenn	58,509.09	12,500.00		71,009.09	27,985.45		43,023.64
Cumberland River below Nashville, Tenn	443,289.04	310,000.00		753,289.04	56,500.00		696,789.04
Tennessee River above Chattanooga, Tenn	57,000.00			57,000.00	57,000.00		
Tennessee River below Chattanooga, Tenn., Ala., and Ky	360,983.32			360,983.32	230,709.25		130,274.07
Obion and Forked Deer Rivers, Tenn	1,620.51			1,620.51	.85		1,619.66
Clinch, Hiwassee, and Holston Rivers, Tenn	2,021.33	5,000.00		7,021.33	2,321.33		4,700.00
French Broad River, Tenn		30,000.00		30,000.00	26,000.00		4,000.00
Tennessee River, Tenn., Ala., and Ky		1,450,000.00		1,450,000.00	282,061.25		1,167,938.75
Kentucky River, Ky	223,212.25	168,000.00		391,212.25	133,573.46		257,638.79
Ohio River	500,545.14	750,000.00		1,250,545.14	361,542.14		889,003.00
Ohio River below Pittsburgh, Pa	2,697,570.48	6,141,000.00		8,838,570.48	2,241,047.30		6,597,523.18
Operating snag boats on the Ohio River		50,000.00		50,000.00	32,810.71		17,189.29
Improving—							
Muskingum River, Ohio	1,089.29		$4,488.18	5,577.47			5,577.47
Detroit River, Mich	1,054,216.95	155,000.00		1,209,216.95	578,000.00		631,216.95
Grand River, Mich	14,500.00			14,500.00	4,000.00		10,500.00
Black River, Mich	1,000.00	1,500.00		2,500.00	2,400.00		100.00
Clinton River, Mich	500.00	12,000.00		12,500.00			12,500.00
Rouge River, Mich	25,000.00	5,000.00		30,000.00	24,500.00		5,500.00
Saginaw River, Mich	234,000.00	200,000.00		434,000.00	227,001.85		206,998.15
St. Marys River, Mich	1,299,789.48	2,300,000.00		3,599,789.48	1,514,738.01		2,085,051.47
Middle and West Neebish Channels, St. Marys River, Mich	28,965.21			28,965.21	24,000.00		4,965.21
Hay Lake and Neebish Channels, St. Marys River, Mich.	770.17		63.59	833.76			833.76
Black and Rouge Rivers and Harbor at Monroe, Mich.	2,180.89			2,180.89		2,180.89	
Waterway from Keweenaw Bay to Lake Superior, Mich.	1,331.29			1,331.29	500.00		831.29
Fox River, Wis	5,028.75	20,000.00		25,028.75	8,966.90		16,061.85
St. Croix River, Wis. and Minn	2,135.27			2,135.27	54.31		2,080.96
Minnesota River, Minn	2,799.63			2,799.63			2,799.63
Red River of the North, Minn. and N. Dak	102.27	24,500.00		24,602.27	6,769.49		17,832.78
Mississippi and Leech Rivers, Minn		116,000.00		116,000.00			116,000.00
Illinois and Mississippi Canal	150,030.72			150,030.72	13,250.94		136,779.78
Improving—							
Illinois River, Ill	53,897.63	120,000.00		173,897.63	25,034.68		148,862.95
Chicago River, Ill	56,717.14	38,000.00		94,717.14	23,162.36		71,554.78
Calumet River, Ill. and Ind	83,510.46	20,000.00		103,510.46	4,000.00		99,510.46
Levees, Cairo, Ill		250,000.00		250,000.00			250,000.00
Levees, Mound City, Ill		20,000.00		20,000.00	1,000.00		19,000.00
Missouri River	440,393.23	3,950,000.00		4,390,393.23	1,008,793.82		3,381,599.41
Polson Bay, Flathead Lake, Mont	500.00			500.00			500.00
Missouri River at St. Joseph, Mo	75,000.00			75,000.00			75,000.00
Gasconade River, Mo	349.08	20,000.00		20,349.08	10,242.46		10,106.62
Osage River, Mo. and Kans	41,269.17	30,000.00		71,269.17	20,551.32		50,717.85
Missouri River at Atchison, Kans	90,000.00			90,000.00			90,000.00
Kansas River, Kans		4,000.00		4,000.00			4,000.00
Protecting banks of Missouri River in Dakota County, Nebr.	48,784.83			48,784.83	48,559.13		225.70

atement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Improving—							
Mokelumne River, Cal	$242.00	$1,000.00		$1,242.00			$1,242.00
San Joaquin River, Cal	56,103.25	237,132.00		293,235.25	$200.00		293,035.25
Petaluma Creek and Napa River, Cal	5,644.45	27,000.00		32,644.45	2,554.31		30,090.14
Redwood Creek, Cal	1,150.00	3,000.00	$529.20	4,679.20			4,679.20
Sacramento and Feather Rivers, Cal	304,003.65	105,000.00		409,003.65	261,368.09		147,635.56
Stockton and Mormon Channels, Cal	35,400.66			35,400.66	800.00		34,600.66
Columbia and Lower Willamette Rivers below Portland, Oreg	175,971.25	540,000.00		715,971.25	314,128.59		401,842.66
Clatskanie River, Oreg	448.80	1,000.00		1,448.80	1,441.20		7.60
Suislaw River, Oreg	63,000.00	45,000.00		108,000.00	84,820.00		23,180.00
Willamette River, Oreg	293,000.00			293,000.00			293,000.00
Columbia River at Cascades, Oreg	1,000.00	100,000.00		101,000.00	445.47		100,554.53
Yaquina River, Oreg		28,800.00		28,800.00			28,800.00
Coquille River, Oreg	5,110.45	6,000.00		11,110.45	6,238.45		4,872.00
Willamette and Yamhill Rivers, Oreg	42.90	84,000.00		84,042.90	34,945.01		49,097.89
Coos River, Oreg		3,000.00		3,000.00	1,500.00		1,500.00
Oregon Slough, Oreg		50,000.00		50,000.00	20,000.00		30,000.00
Mouth of Columbia River, Oreg. and Wash	134,637.57	2,000,000.00		2,134,637.57	1,143,009.34		991,628.23
Columbia River at Three Mile Rapids, Oreg. and Wash	12,717.93	1,900,000.00		1,912,717.93	603,694.13		1,309,023.80
Upper Columbia and Snake Rivers, Oreg. and Wash	28,930.53	160,000.00		188,930.53	65,984.78		122,945.75
Gauging waters of Columbia River	500.00	1,000.00		1,500.00	1,500.00		
Improving—							
Waterways connecting Puget Sound with Lakes Union and Washington	75,096.88	505,000.00		580,096.88	326,485.82		253,611.06
Cowlitz and Lewis Rivers, Wash	5,115.04	29,000.00		34,115.04	15,506.91		18,608.13
Cowlitz, Lewis, and Clatskanie Rivers, Wash. and Oreg		55,000.00		55,000.00	500.00		54,500.00
Waterway connecting Port Townsend Bay and Oak Bay, Wash		62,500.00		62,500.00			62,500.00
Okanogan and Pend d'Oreille Rivers, Wash	10,780.79		206.18	10,986.97		$10,986.97	
Columbia River between Bridgeport and Kettle Falls, Wash	12,937.94	65,000.00		77,937.94	36,943.98		40,993.96
Skagit River, Wash	23.00	25,000.00		25,023.00	4,523.00		20,500.00
Grays River, Wash	286.05	500.00		786.05	286.05		500.00
Snohomish River, Wash	10.20	75,000.00		75,010.20	74,998.70		11.50
Swinomish Slough, Wash	10,000.00			10,000.00			10,000.00

Willapa River and Harbor, Wash.	19,000.52	75,000.00	....	94,000.52	93,508.88	....	491.64
Puget Sound, Wash.	81,551.54	50,000.00	....	131,551.54	11,484.09	....	120,067.45
Columbia River, Wash.	13,000.00	....	....	13,000.00	....	....	13,000.00
Columbia River between Wenatchee and Bridgeport, Wash.	850.00	....	....	850.00	850.00	....	....
Hoquiam River, Wash.	....	12,000.00	....	12,000.00	12,000.00	....	....
St. Michael Canal, Alaska	8,025.00	....	....	8,025.00	....	....	8,025.00
Yukon River, Alaska	....	130,000.00	....	130,000.00	85,000.00	....	45,000.00
Building engineer school for river and harbor instruction, Washington, D. C.	....	100,000.00	....	100,000.00	500.00	....	99,500.00
Preservation and maintenance of river and harbor works	376,776.66	....	....	376,776.66	144,299.48	55,480.08	176,997.10
Emergencies in river and harbor works	673,018.15	....	....	673,018.18	[1] *100,000.00* 125,006.88	....	448,011.30
Examinations, surveys, and contingencies of rivers and harbors	393,630.03	[2] *100,000.00* 250,000.00	....	743,630.03	216,787.77	....	526,842.26
Removing sunken vessels or craft obstructing or endangering navigation	....	127,957.07	....	127,957.07	127,957.07	....	....
Operating and care of canals and other works of navigation	....	2,286,557.66	....	2,286,557.66	2,286,557.66	....	....
Relief of—							
Henry G. Roetzel and Paul Shipman	....	4,230.00	....	4,230.00	4,230.00	....	....
Katherine Ratchford, for injuries to son, James Ratchford	....	900.00	....	900.00	900.00	....	....
West Kentucky Coal Co.	....	3,017.48	....	3,017.48	3,017.48	....	....
Claims for damages by collision, river and harbor works	....	2,666.94	....	2,666.94	2,076.84	590.10	....
Total rivers and harbors	37,036,157.13	[1] *100,000.00* 84,353,339.05	38,195.31	121,527,691.49	[2] *100,000.00* 41,368,865.97	392,177.84	79,666,647.68
Repayments in excess of payments	....	....	....	....	38,195.31	....	....
Actual expenditures	....	....	....	....	41,330,670.66	....	....

Funds contributed pursuant to legislation contained in the river and harbor acts of June 25, 1910, Feb. 27, 1911, July 25, 1912, July 26, 1912, and Mar. 4, 1913, for the following purposes are not included in the foregoing statement of receipts and expenditures for the reason that they are considered by the War Department as trust or special funds.

Funds contributed for improvement of Savannah River at Augusta, Ga. (act June 25, 1910):

Balances on hand July 1, 1912	$60,000.00
Expended during the fiscal year 1913	30,000.00
Balance on hand June 30, 1913	30,000.00

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[1] Reappropriation by Treasury transfer warrant from "Emergencies in river and harbor works," $100,000.

[2] Expenditure by Treasury transfer warrant to credit of "Examinations, surveys, and contingencies of rivers and harbors," $100,000.

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no linger required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Rivers and harbors—Continued.							
Engineer Department—Continued.							
Funds contributed for improvement of Sabine-Neches Canal, Tex. (act Feb. 27, 1911):							
Balance on hand July 1, 1912....... $20,000.00							
Receipts during the fiscal year 1913.. 119,000.00							
139,000.00							
Expended during the fiscal year 1913 124,000.00							
Balance on hand June 30, 1913.... 15,000.00							
Funds contributed for improvement of Sacramento and Feather Rivers, Cal. (act June 25, 1910):							
Balance on hand July 1, 1912....... 400,000.00							
Expended during the fiscal year 1913 30,000.00							
Balance on hand June 30, 1913.... 370,000.00							
Funds contributed for improvement of Houston Ship Channel, Tex. (act June 25, 1910):							
Receipts during the fiscal year 1913.. 600,000.00							
Expended during the fiscal year 1913 550,000.00							
Balance on hand June 30, 1913.... 50,000.00							
Funds contributed for improvement of Willamette River, Oreg. (act June 25, 1910):							
Balance on hand July 1, 1912....... 200,000.00							
Balance on hand June 30, 1913...... 200,000.00							
Funds contributed for improvement of Elk and Little Elk Rivers, Md. (act July 26, 1912):							

Receipts during the fiscal year 1913..	2,020.00
Expended during the fiscal year 1913	2,020.00
Funds contributed for improvement of Charlotte Harbor, Fla. (act July 26, 1912):	
Receipts during the fiscal year 1913..	20,000.00
Expended during the fiscal year 1913	15,000.00
Balance on hand June 30, 1913...	5,000.00
Funds contributed for improvement of St. Joseph Harbor, Fla. (act July 25, 1912):	
Receipts during the fiscal year 1913..	10,000.00
Expended during the fiscal year 1913	10,000.00
Funds contributed for improvement of Siuslaw River, Oreg. (act June 25, 1910, and Feb. 27, 1911):	
Receipts during the fiscal year 1913..	50,000.00
Expended during the fiscal year 1913	22,000.00
Balance on hand June 30, 1913....	28,000.00
Funds contributed for improvement of Oregon Slough, Oreg. (act July 25, 1912):	
Receipts during the fiscal year 1913..	20,000.00
Expended during the fiscal year 1913	20,000.00
Funds contributed for improvement of Cowhead River, Ga. (act July 25, 1912):	
Receipts during the fiscal year 1913..	3,000.00
Expended during the fiscal year 1913	3,000.00
Funds contributed for improvement of levees, Mound City, Ill. (act July 25, 1912):	
Receipts during the fiscal year 1913..	20,000.00
Expended during the fiscal year 1913	1,000.00
Balance on hand June 30, 1913....	19,000.00
Funds contributed for improvement of harbor at Olcott, N. Y. (act Mar. 4, 1913):	
Receipts during the fiscal year 1913.	1,500.00
Expended during the fiscal year 1913............................	750.00
Balance on hand June 30, 1913...	750.00

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228, showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
PUBLIC WORKS—CIVIL—Continued.							
Summary public works, civil.							
Military parks, etc.	$24,388.19	$560,060.00		$584,448.19	$484,506.68	$146.09	$99,795.42
Buildings and grounds in and around Washington		282,990.00		282,990.00	281,888.13		1,101.87
Monuments	269,613.39	45,200.00		314,813.39	78,528.56	360.03	235,924.81
Rivers and harbors	37,036,157.13	**100,000.00* 84,353,339.05		121,489,496.18	***100,000.00* 41,330,670.66	392,177.84	79,666,647.68
Total public works, civil	37,330,158.71	**100,000.00* 85,241,589.05		122,671,747.76	***100,000.00* 42,175,594.02	392,683.96	80,003,469.78
Summary public works.							
Military	7,577,371.07	**396,000.00* 10,080,700.58		18,054,071.65	***211,000.00* 5,342,862.12	37,768.48	12,462,441.05
Civil	37,330,158.71	**100,000.00* 85,241,589.05		122,671,747.76	***100,000.00* 42,175,594.02	392,683.96	80,003,469.78
Total public works	44,907,529.78	**496,000.00* 95,322,289.63		140,725,819.41	***311,000.00* 47,518,456.14	430,452.44	92,465,910.83
MISCELLANEOUS.							
National cemeteries.							
Secretary's office:							
Marking graves of Confederate soldiers and sailors who died in northern prisons	53,446.01			53,446.01	1,992.00		51,454.01
Quartermaster Corps:							
National cemetery—							
Shiloh, Tenn.	64.65			64.65		64.65	
Chalmette, La.	20.80			20.80		20.80	
City of Mexico, Mexico	26.62			26.62		26.62	
Confederate mound, Oakwood cemetery, Chicago, Ill.		250.00		250.00	250.00		
Cave Hill Cemetery, Louisville, Ky., purchase of land		25,000.00		25,000.00	25,000.00		
Care, etc., of Confederate burial plats		1,250.00		1,250.00	1,091.66		158.34
National cemeteries		120,000.00		120,000.00	112,674.87		7,325.13
Pay of superintendents of national cemeteries		63,035.00		63,035.00	62,910.00		125.00
Headstones for graves of soldiers		75,000.00		75,000.00	28,679.85		46,320.15
Burial of indigent soldiers		3,000.00		3,000.00	1,500.00		1,500.00

Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark		[1] 263.00		263.00	200.00		63.00
Repairing roads to national cemeteries		12,000.00		12,000.00	8,365.07		3,634.93
Road to National Cemetery, Salisbury, N. C	600.00			600.00			600.00
Fencing, etc., monument on Bighole battlefield, Mont	50.00			50.00		50.00	
Monuments or tablets in Cuba and China	2,255.12	1,000.00		3,255.12	511.59		2,743.53
Antietam battlefield preservation		4,500.00		4,500.00	4,500.00		
Disposition of remains of officers, soldiers, and civil employees		57,500.00		57,500.00	44,798.75		12,701.25
Total national cemeteries	56,463.20	[1] 263.00 362,535.00		419,261.20	292,473.79	162.07	126,625.34
Miscellaneous objects.							
Secretary's Office:							
Wagon roads, bridges, and trails, Alaska fund	87,899.48	173,018.70		260,918.18	227,932.05		32,986.13
Construction and maintenance of military and post roads, bridges, and trails, Alaska		125,000.00		125,000.00	124,989.82		10.18
Philippine exhibit, Alaska-Yukon-Pacific Exposition, Seattle, Wash	8,992.42			8,992.42		8,992.42	
Medals of honor for distinguished services	788.58			788.58			788.58
Soldiers home, interest account	24,388.20	99,543.79		123,931.99	98,780.49		25,151.50
Quartermaster Corps:							
Medals for volunteers, War with Spain	986.93		3.50	990.43			990.43
Adjutant General's Department:							
Collecting military records of Revolutionary War		25,000.00		25,000.00			25,000.00
Medical Department:							
Artificial limbs		115,000.00		115,000.00	105,125.24		9,874.76
Appliances for disabled soldiers		2,000.00		2,000.00	900.00		1,100.00
Trusses for disabled soldiers		5,000.00		5,000.00	2,600.00		2,400.00
Engineer Department:							
Survey of northern and northwestern lakes	587.64	125,000.00		125,587.64	122,594.30		2,993.34
Survey of Fort Caswell Military Reservation, N. C	750.00			750.00			750.00
Expenses California Débris Commission		15,000.00		15,000.00	9,201.45		5,798.55
Bridge across Mississippi River at Fort Snelling, Minn	6,109.50			6,109.50		6,109.50	
Maps, War Department		5,000.00		5,000.00	5,000.00		
Army Medical Museum and library building	3,271.00			3,271.00		3,271.00	
Prevention of deposits, harbor of New York		85,260.00		85,260.00	85,260.00		
Meeting of permanent international association of navigation congresses in the United States	831.44		451.30	1,282.74			1,282.74
Permanent international commission of congresses of navigation		3,000.00		3,000.00	3,000.00		
International Waterways Commission, August 23, 1912		2,944.44		2,944.44	2,944.44		
International Waterways Commission	3,343.01	11,750.00		15,093.01	[1] 1.23 15,091.78		
Preservation of Niagara Falls	21,039.19			21,039.19	2,521.84		18,517.35
Raising U. S. S. Maine, etc., harbor of Habana, Cuba	173,396.18			173,396.18	72,139.48		101,256.70

[1] Reappropriation by Treasury transfer warrant from "Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark., 1911 and 1912," $263.

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MISCELLANEOUS—Continued.							
Miscellaneous objects—Continued.							
Board of Managers, National Home for Disabled Volunteer Soldiers:							
National Home for Disabled Volunteer Soldiers		$3,797,960.00		$3,797,960.00	$3,791,904.82		$6,055.18
Buildings and appurtenances	$89,492.87	45,700.00		135,192.87	38,885.78		96,307.09
Mountain Branch, judgment		22,826.62		22,826.62	22,826.62		
National Sanitarium for Disabled Volunteer Soldiers, Hot Springs, S. Dak.		164,000.00		164,000.00	163,523.32		476.68
Buildings and appurtenances	5,996.55			5,996.55	3,000.00		2,996.55
State or Territorial homes for disabled soldiers and sailors		1,200,000.00		1,200,000.00	1,200,000.00		
Total miscellaneous objects	427,872.99	6,023,003.55	$454.80	6,451,331.34	[1]*1.23* 6,098,221.43	$18,372.92	334,735.76
Repayments in excess of payments					454.80		
Actual expenditures					6,097,766.63		
The account for "Soldiers' home permanent fund" is not included in the foregoing statement of receipts and expenditures under "Miscellaneous" for the reason that it represents a trust fund and therefore not considered a proper charge to the War Department. The account appears on the War ledger as follows:							
Balance July 1, 1912 .... $3,299,620.20							
Receipts during the fiscal year 1913 .... 504,289.93							
Total 3,803,910.13							
Paid out on Treasury settlements during fiscal year 1913 .... 486,319.23							
Balance available June 30, 1913 .... 3,317,590.90							
War claims and relief acts.							
Arrears of pay, bounty, etc., certified claims		200,000.00		200,000.00	146,383.29		53,616.71
Pay, etc., of the Army, War with Spain, certified claims		5,000.00		5,000.00	4,998.35		1.65
Extra pay to volunteers, War with Spain		3,351.10		3,351.10	3,351.10		
Extra pay to Regular Army, War with Spain		430.00		430.00	430.00		

Claims of officers and men of the Army for destruction of private property		7,513.56		7,513.56	7,513.56		
Claims for damages to and loss of private property	1,540.35	34,268.43		35,808.78	32,852.90		2,955.88
Reimbursement to States and Territories for expenses of raising troops, War with Spain		1,825.77		1,825.77	1,825.77		
Relief of Lillie Nelson	195.00			195.00			195.00
Replacing Ordnance equipment, State of Massachusetts	42,423.21			42,423.21			42,423.21
Claims for property taken from Confederate officers and soldiers after surrender	9,059.05			9,059.05	2,320.00		6,739.05
Payment of claims of certain religious orders of the Roman Catholic Church, Philippine Islands	42,120.00			42,120.00	42,120.00		
Claims reported by the Court of Claims under the Bowman and Tucker Acts	1,764.34			1,764.34	1,293.75		470.59
Relief of persons for damages by explosion at Frankford Arsenal, Pa	44.49			44.49			44.49
Relief of persons for damages by fire at Rock Island Arsenal, Ill	13.35			13.35			13.35
Relief of sufferers from famine in China	5,563.11			5,563.11			5,563.11
Relief of—							
G. A. Embry		200.00		200.00	200.00		
Sarah A. Waite, widow of George B. Waite		1,050.00		1,050.00	1,050.00		
Mary E. Quinn, widow of James H. Quinn		1,500.00		1,500.00	1,500.00		
Catherine Grimm		1,200.00		1,200.00	1,200.00		
Lieut. Sanderford Jarmen, U. S. Army		550.91		550.91	550.91		
Harry F. Wade, for injuries		2,500.00		2,500.00	2,500.00		
John C. Sullivan		1,108.40		1,108.40	1,108.40		
Felix Morgan, for injuries		2,500.00		2,500.00			2,500.00
Relief of sufferers from earthquake and conflagration on Pacific coast	598,474.60			598,474.60		598,474.60	
Relief of sufferers from the cyclone in certain southern States	5,035.79			5,035.79			5,035.79
Relief of sufferers from floods in Mississippi and Ohio valleys	357,541.57	4,500.00		362,041.57	169,797.29	190,851.49	1,392.79
Claims for damages to property in Virginia, War with Spain	378.00			378.00	31.00		347.00
Payment for damages to private property by gun firing	56.72			56.72			56.72
Trust fund, effects of Alphonse Strebler, deceased, U. S. Army	50.15			50.15			50.15
Preventing and suppressing Indian hostilities			71.17	71.17		71.17	
Investigating claims of American citizens for damages, insurrection in Mexico		5,000.00		5,000.00	1,799.53		3,200.47
Reimbursement to—							
Figueras Hermanos		40.00		40.00	40.00		
State of Texas, expenses of policing international boundary		9,639.41		9,639.41	9,639.41		
Officers and men of the Army for losses fighting fires on national forests		15,862.08		15,862.08	12,604.54		3,257.54
Charles S. Jackson		82.00		82.00	82.00		
Payment of claims for improvement Fort William H. Seward Military Reservation		2,384.00		2,384.00	2,330.00		54.00
Refunding moneys erroneously received and covered		13.80		13.80	13.80		
Judgments, United States courts, war		48,355.04		48,355.04	48,355.04		
Payment to certain employees of the Government for injuries, war		16,115.00		16,115.00	10,615.00		5,500.00

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[1] Expenditure by Treasury transfer warrant to credit of "International Waterways Commission, 1912," $1.23.

Statement of the appropriations of the preceding fiscal year (1913) for the Department of War, as required by the act of May 1, 1820 (R. S., sec. 228), showing the amount appropriated under each specific head of appropriation, the amount expended under each head, and the balance which, on the 30th day of June, 1913, remained unexpended, together with the amount covered into the surplus fund of the Treasury which is no longer required for expenditure—Contd.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MISCELLANEOUS—Continued.							
War claims and relief acts—Continued.							
Judgments, Court of Claims, war	$28,312.11	$300,453.87	....	$328,765.98	$206,399.97	....	$122,366.01
Transportation for refugee American citizens from Mexico	....	100,000.00	....	100,000.00	41,753.40	....	58,246.60
Total war claims and relief acts	1,092,571.84	765,443.37	$71.17	1,858,086.38	754,659.01	$789,397.26	314,030.11
Repayments in excess of payments	....	....	....	....	71.17	....	....
Actual expenditures	....	....	....	....	754,587.84	....	....
Summary miscellaneous.							
National cemeteries	56,463.20	*263.00 362,535.00	....	419,261.20	292,473.79	162.07	126,625.34
Miscellaneous objects	427,872.99	6,023,003.55	....	6,450,876.54	**1.23 6,097,766.63	18,372.92	334,735.76
War claims and relief acts	1,092,571.84	765,443.37	....	1,858,015.21	754,587.84	789,397.26	314,030.11
Total miscellaneous	1,576,908.03	*263.00 7,150,981.92	....	8,728,152.95	**1.23 7,144,828.26	807,932.25	775,391.21
RECAPITULATION.							
Civil establishment	454.06	2,043,425.58	....	2,043,879.64	1,942,653.91	....	101,225.73
Military Establishment	7,168,883.98	*1,000.80 100,914,977.83	....	108,084,862.56	**10,000.00 95,261,622.58	....	12,813,239.98
Public works	44,907,529.78	*185,000.00 95,322,289.63	....	140,414,819.41	47,518,456.14	430,452.44	92,465,910.83
Miscellaneous	1,576,908.03	*263.00 7,150,981.92	....	8,728,152.95	**1.23 7,144,828.26	807,932.25	775,391.21
Total	53,653,775.80	*186,263.80 205,431,674.96	....	259,271,714.56	**10,001.23 151,867,560.89	1,238,384.69	106,155,767.75

APPENDIX C.

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1912 (1912), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1912 and the balances remaining in the Treasury subject to requisition July 1, 1913.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
CIVIL ESTABLISHMENT.							
Secretary's office:							
Salaries—							
Office of Secretary of War	$2,970.00		$378.07	$3,348.07			$3,348.07
Adjutant General's Office	15,650.00		1,376.86	17,026.86			17,026.86
Office of Inspector General	140.00		5.01	145.01			145.01
Office of Judge Advocate General, United States Army	341.19		.83	342.02			342.02
Signal Office	160.00		6.67	166.67			166.67
Office of Quartermaster General	5,960.00		1,036.50	6,996.50			6,996.50
Office of Commissary General	1,840.00		261.98	2,101.98			2,101.98
Office of Surgeon General	2,198.00		547.05	2,745.05			2,745.05
Office of Paymaster General	870.00		114.55	984.55			984.55
Office of Chief of Ordnance	470.00		46.62	516.62			516.62
Office of Chief of Engineers	540.00		88.29	628.29			628.29
Bureau of Insular Affairs	1,775.00		133.03	1,908.03			1,908.03
Contingent expenses, War Department	2,150.44			2,150.44	$1,644.40		506.04
Stationery, War Department	1,242.00		318.68	1,560.68			1,560.68
Postage to Postal Union countries, War Department	300.00			300.00			300.00
Engineer Department:							
Salaries of employees, public buildings and grounds			656.50	656.50			656.50
Contingent expenses, public buildings and grounds			7.17	7.17			7.17
Total civil establishment	36,606.63		4,977.81	41,584.44	1,644.40		39,940.04
Less payments			1,644.40				
Repayments in excess of payments			3,333.41				
MILITARY ESTABLISHMENT.							
Support of the Army.							
Secretary's office:							
Contingencies of the Army	20,141.10			20,141.10	1,729.07		18,412.03
Office of the Chief of Staff:							
Contingencies, military information section, General Staff Corps	283.35		2,030.46	2,313.81			2,313.81
Army War College	1,000.00			1,000.00	1,000.00		
United States service schools			2,659.51	2,659.51			2,659.51
Coast Artillery School, Fort Monroe, Va	7.26		323.45	330.71			330.71

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1912 (1912), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1912 and the balances remaining in the Treasury subject to requisition July 1, 1913—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Support of the Army—Continued.							
The Adjutant General's Department:							
Contingencies, headquarters of military departments	$1,300.00		$233.93	$1,533.93			$1,533.93
Chief Signal Officer:							
Signal service of the Army	97,850.31			97,850.31	$87,502.57		10,347.74
Washington-Alaska military cable and telegraph system	48.20			48.20	43.20		5.00
Wireless telephone apparatus	1,251.54			1,251.54	1,244.20		7.34
Quartermaster Corps:							
Pay, etc., of the Army	104,887.75	$1,822,320.80		1,927,208.55	1,721,934.61		205,273.94
Mileage to officers and contract surgeons	5,522.71			5,522.71	337.20		5,185.51
Subsistence of the Army	299,733.48	629,642.61		929,376.09	795,943.95		133,432.14
Regular supplies, Quartermaster's Department	1,002,030.64			1,002,030.64	411,877.94		590,152.70
Replacing regular supplies (act Mar. 23, 1910)	4,790.65			4,790.65	266.29		4,524.36
Equipment of officers' schools at military posts	2,020.81		247.34	2,268.15			2,268.15
Incidental expenses, Quartermaster's Department	182,210.64			182,210.64	9,529.44		172,681.20
Replacing incidental expenses (act Mar. 23, 1910)	15.02			15.02			15.02
Horses for Cavalry, Artillery, Engineers, etc	5,369.40			5,369.40	4,677.96		691.44
Replacing horses for Cavalry, Artillery, Engineers, etc. (act Mar. 23, 1910)	1,703.75		1,354.50	3,058.25			3,058.25
Barracks and quarters	85,814.60			85,814.60	31,097.88		54,716.72
Military post exchanges	1,719.38			1,719.38	34.99		1,684.39
Transportation of the Army and its supplies	1,319,527.71			1,319,527.71	858,298.06		461,229.65
Replacing transportation of the Army and its supplies (act Mar. 23, 1910)	1,073.37			1,073.37			1,073.37
Roads, walks, wharves, and drainage	57,392.02			57,392.02	36,627.55		20,764.47
Water and sewers at military posts	550,279.68			550,279.68	[1] *176,000.80* 219,229.73		155,049.15
Clothing and camp and garrison equipage	1,230,612.09			1,230,612.09	1,111,668.19		118,943.90
Replacing clothing and camp and garrison equipage (act Mar. 23, 1910)	318,706.17			318,706.17	318,249.29		456.88
Construction and repair of hospitals	206,667.39			206,667.39	197,346.35		9,321.04
Quarters for hospital stewards	578.91		72.33	651.24			651.24
Shooting galleries and ranges	45,897.00			45,897.00	29,955.28		15,941.72
Maintenance, Army War College	1,311.09		447.70	1,758.79			1,758.79

Bureau of Insular Affairs:							
Care of insane Filipino soldiers	1,500.00		421.45	1,921.45			1,921.45
Care of insane soldiers, Porto Rico Regiment of Infantry	540.00		60.00	600.00			600.00
Medical Department:							
Medical and hospital department	95,559.82			95,559.82	55,176.15		40,383.67
Replacing medical supplies	2.03		9,259.91	9,261.94			9,261.94
Army Medical Museum	479.79			479.79	385.68		94.11
Library, Surgeon General's Office	1,456.51			1,456.51	1,436.89		19.62
Engineer Department:							
Engineer depots	3,872.32			3,872.32	3,641.93		230.39
Engineer School, Washington, D. C.	2,454.44			2,454.44	1,942.18		512.26
Engineer equipment of troops	26,264.26			26,264.26	21,896.00		4,368.26
Civilian assistants to engineer officers	2,523.20			2,523.20			2,523.20
Contingencies, engineer department, Philippine Islands	1,300.00			1,300.00	1,286.63		13.37
Ordnance Department:							
Ordnance service	13,062.58			13,062.58	11,266.90		1,795.68
Ordnance stores, ammunition	17,224.34			17,224.34	15,887.38		1,336.96
Small-arms target practice	42,133.70			42,133.70	40,281.13		1,852.57
Manufacture of arms	289,199.68			289,199.68	287,939.38		1,260.30
Ordnance stores and supplies	1,867.92			1,867.92	749.40		1,118.52
National trophy and medals for rifle contests	28.34			28.34	11.88		16.46
Automatic rifles	16,163.83			16,163.83	16,117.83		46.00
Replacing ordnance and ordnance stores	354,404.72			354,404.72	234,974.51		119,430.21
Total support of the Army	6,419,783.50	2,451,963.41	17,110.58	8,888,857.49	[1] *176,000.80* 6,531,587.62		2,181,269.07
Repayments in excess of payments					17,110.58		
Actual expenditures					6,514,477.04		
Military Academy.							
Pay of Military Academy		30,000.00		30,000.00	20,263.03		9,736.97
Current and ordinary expenses, Military Academy	.35	10,000.00		10,000.35	4,193.59		5,806.76
Miscellaneous items and incidental expenses, Military Academy	8.86		1,144.75	1,153.61			1,153.61
Buildings and grounds, Military Academy			1,228.26	1,228.26			1,228.26
Total Military Academy	9.21	40,000.00	2,373.01	42,382.22	24,456.62		17,925.60
Repayments in excess of payments					2,373.01		
Actual expenditures					22,083.61		

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[1] Expenditure by Treasury transfer warrants to credit of—"Water system, Schofield Barracks, Hawaii, 1913," $175,000; "Water and sewers at military posts, 1913," $1,000.80.

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1912 (1912), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1912 and the balances remaining in the Treasury subject to requisition July 1, 1913—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Organized Militia.							
Encampment and maneuvers, Organized Militia	$7,529.76		$33,886.91	$41,416.67			$41,416.67
Equipment of Coast Artillery armories, Organized Militia	254,686.31			254,686.31	$223,076.96		31,609.35
Arms, uniforms, equipment, etc., Organized Militia		$785,585.77		785,585.77	785,585.77		
Total Organized Militia	262,216.07	785,585.77	33,886.91	1,081,688.75	1,008,662.73		73,026.02
Repayments in excess of payments					33,886.91		
Actual expenditures					974,775.82		
Summary Military Establishment.							
Support of the Army	6,419,783.50	2,451,963.41		8,871,746.91	[1] *176,000.80* 6,514,477.04		2,181,269.07
Military Academy	9.21	40,000.00		40,009.21	22,083.61		17,925.60
Organized Militia	262,216.07	785,585.77		1,047,801.84	974,775.82		73,026.02
Total military establishment	6,682,008.78	3,277,549.18		9,959,557.96	[1] *176,000.80* 7,511,336.47		2,272,220.69
PUBLIC WORKS—MILITARY.							
Arsenals.							
Ordnance Department:							
Rock Island power plant, Rock Island, Ill	385.16		26.45	411.61			411.61
Testing machine			26.07	26.07			26.07
Repairs of arsenals	60,761.02			60,761.02	59,358.59		1,402.43
Total arsenals	61,146.18		52.52	61,198.70	59,358.59		1,840.11
Repayments in excess of payments					52.52		
Actual expenditures					59,306.07		

PUBLIC WORKS—CIVIL.

Buildings and grounds in and around Washington.							
Engineer Department:							
Improvement and care of public grounds			129.76	129.76			129.76
Improvement and care of public grounds, District of Columbia			21.14	21.14			21.14
Repairs, fuel, etc., Executive Mansion			469.32	469.32			469.32
Lighting, etc., Executive Mansion, etc	147.67			147.67	142.38		5.29
Lighting public grounds, District of Columbia			55.82	55.82			55.82
Telegraph to connect the Capitol with the departments and Government Printing Office			27.56	27.56			27.56
Repairs to building where Abraham Lincoln died			96.75	96.75			96.75
Care and maintenance of Washington Monument			77.53	77.53			77.53
Improvements birthplace of Washington, Wakefield, Va			83.50	83.50			83.50
Total buildings and grounds in and around Washington	147.67		961.38	1,109.05	142.38		966.67
Less payments			142.38				
Repayments in excess of payments			819.00				
Rivers and harbors.							
Engineer Department:							
Maintenance of South Pass Channel, Mississippi River	26,469.24			26,469.24	2,745.14		23,724.10
Gauging waters of the Mississippi River and its tributaries	1,185.21			1,185.21	483.31		701.90
Removing obstructions in Mississippi, Atchafalaya, and Old Rivers	5,000.00			5,000.00	1,823.71		3,176.29
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers	1,481.85			1,481.85	1,442.70		39.15
Operating snag boats on the Ohio River	16,843.67		6,667.82	23,511.49			23,511.49
Total rivers and harbors	50,979.97		6,667.82	57,647.79	6,494.86		51,152.93
Less payments			6,494.86				
Repayments in excess of payments			172.96				
Summary public works—civil.							
Buildings and grounds in and around Washington	147.67		819.00	966.67			966.67
Rivers and harbors	50,979.97		172.96	51,152.93			51,152.93
Total public works, civil	51,127.64		991.96	52,119.60			52,119.60
Summary public works.							
Military	61,146.18			61,146.18	59,306.07		1,840.11
Civil	51,127.64		991.96	52,119.60			52,119.60
Total public works	112,273.82		991.96	113,265.78	59,306.07		53,959.71
Repayments in excess of payments					991.96		
Actual expenditures					58,314.11		

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1912 (1912), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1912 and the balances remaining in the Treasury subject to requisition July 1, 1913—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MISCELLANEOUS.							
National cemeteries.							
Quartermaster Corps:							
National cemeteries	$5,873.77			$5,873.77	$803.86		$5,069.91
Pay of superintendents of national cemeteries	207.35		$347.32	554.67			554.67
Headstones for graves of soldiers	20,651.18			20,651.18	15,943.39		4,707.79
Burial of indigent soldiers	501.00			501.00	375.55		125.45
Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark.	200.00		63.00	263.00	[1] *263.00*		
Repairing roads to national cemeteries	206.77		61.58	268.35			268.35
Antietam battlefield preservation	500.00			500.00	311.65		188.35
Disposition of remains of officers, soldiers, and civil employees	23,073.84			23,073.84	5,107.90		17,965.94
Total national cemeteries	51,213.91		471.90	51,685.81	[1] *263.00* 22,542.35		28,880.46
Repayments in excess of payments					471.90		
Actual expenditures					22,070.45		
Miscellaneous objects.							
Medical Department:							
Artificial limbs	34,121.91		2,535.63	36,657.54			36,657.54
Appliances for disabled soldiers	900.00		132.18	1,032.18			1,032.18
Trusses for disabled soldiers	2,100.00			2,100.00	9.47		2,090.53
Engineer Department:							
Expenses California Débris Commission	2,039.51		1,097.55	3,137.06			3,137.06
Repairs to Army medical museum building			8.54	8.54			8.54
Maps, War Department	3.40		13.53	16.93			16.93
Prevention of deposits, harbor of New York	100.06			100.06	20.59		79.47
International Waterways Commission		[2] *$1.23*	2,944.44	2,945.67			2,945.67
Board of Managers, National Homes for Disabled Volunteer Soldiers:							
National Home for Disabled Volunteer Soldiers	2,916.42	12,500.00	179,516.94	194,933.36			194,933.36

National Sanitarium for Disabled Volunteer Soldiers, Hot Springs, S. Dak.		7,300.00	2,755.37	10,055.37			10,055.37
State or Territorial homes for disabled soldiers and sailors	262,653.90	19,710.12		282,364.02	282,364.02		
Total miscellaneous objects	304,835.20	[2] *1.23* 39,510.12	189,004.18	533,350.73	282,394.08		250,956.65
Repayments in excess of payments					189,004.18		
Actual expenditures					93,389.90		
War claims and relief acts.							
Arrears of pay, bounty, etc., certified claims	5,751.48			5,751.48	2,189.81		3,561.67
Pay, etc., of the Army, War with Spain, certified claims	2.77			2.77			2.77
Total war claims and relief acts	5,754.25			5,754.25	2,189.81		3,564.44
Summary miscellaneous.							
National cemeteries	51,213.91			51,213.91	[1] *263.00* 22,070.45		28,880.46
Miscellaneous objects	304,835.20	[2] *1.23* 39,510.12		344,346.55	93,389.90		250,956.65
War claims and relief acts	5,754.25			5,754.25	2,189.81		3,564.44
Total miscellaneous	361,803.36	[2] *1.23* 39,510.12		401,314.71	[1] *263.00* 117,650.16		283,401.55
RECAPITULATION.							
Civil establishment	36,606.63		3,333.41	39,940.04			39,940.04
Military Establishment	6,682,008.78	3,277,549.18		9,959,557.96	*176,000.80* 7,511,336.47		2,272,220.69
Public works	112,273.82			112,273.82	58,314.11		53,959.71
Miscellaneous	361,803.36	*1.23* 39,510.12		401,314.71	*263.00* 117,650.16		283,401.55
Total	7,192,692.59	*1.23* 3,317,059.30	3,333.41	10,513,086.53	*176,263.80* 7,687,300.74		2,649,521.99
Repayment in excess of payment					3,333.41		
Actual expenditures					7,683,967.33		

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[1] Expenditure by Treasury transfer warrant to credit of "Burial of indigent patients, Army and Navy Hospital, Hot Springs, Ark., 1913," $263.
[2] Reappropriation by Treasury transfer warrant from "International Waterways Commission, no year," $1.23.

APPENDIX D.

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1911 (1911), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1911, and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110).

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
CIVIL ESTABLISHMENT.							
Secretary's office:							
Salaries—							
Office of Secretary of War	$2,035.96			$2,035.96		$2,035.96	
Adjutant General's Office	22,031.90			22,031.90		22,031.90	
Office of Inspector General	331.11			331.11		331.11	
Office of Judge Advocate General, United States Army	570.83			570.83		570.83	
Signal Office	971.34			971.34		971.34	
Office of Quartermaster General	4,321.35			4,321.35		4,321.35	
Office of Commissary General	248.30			248.30		248.30	
Office of Surgeon General	2,934.28			2,934.28		2,934.28	
Office of Paymaster General	464.51			464.51		464.51	
Office of Chief of Ordnance	1,436.92			1,436.92		1,436.92	
Office of Chief of Engineers	761.43			761.43		761.43	
Bureau of Insular Affairs	1,642.77			1,642.77		1,642.77	
Contingent expenses, War Department	337.73			337.73		337.73	
Stationery, War Department	212.15			212.15		212.15	
Postage to Postal Union countries, War Department	500.00			500.00		500.00	
Engineer Department:							
Salaries of employees, public buildings and grounds	1,102.63			1,102.63		1,102.63	
Contingent expenses, public buildings and grounds	.54			.54		.54	
Total civil establishment	39,953.75			39,953.75		39,953.75	
MILITARY ESTABLISHMENT.							
Support of the Army.							
Secretary's office:							
Contingencies of the Army	15,214.18		$23.70	15,237.88		15,237.88	
Office of the Chief of Staff:							
Contingencies, military-information section, General Staff Corps	237.38			237.38	$13.35	224.03	
Army War College	103.94			103.94		103.94	
United States service schools	3,917.97			3,917.97		3,917.97	
The Adjutant General's Department:							
Contingencies, headquarters of military departments	762.17		21.77	783.94		783.94	

Chief Signal Officer:							
Signal service of the Army	356.14			356.14	341.16	14.98	
Washington-Alaska military cable and telegraph system	62.97			62.97		62.97	
Quartermaster Corps:							
Pay, etc., of the Army	116,861.04	$7,368.00	36,556.32	160,785.36		153,417.36	$7,368.00
Mileage to officers and contract surgeons	60,029.32		6,410.41	66,439.73		66,439.73	
Subsistence of the Army	259,981.07		338.86	260,319.93		260,319.93	
Regular supplies, Quartermaster's Department	388,154.59		82,679.22	470,833.81		470,833.81	
Equipment of officers' schools, at military posts	1,779.98		26.68	1,806.66		1,806.66	
Incidental expenses, Quartermaster's Department	199,098.53		12,379.45	211,477.98		211,477.98	
Horses for Cavalry, Artillery, and Engineers	18,552.70		25.00	18,577.70		18,577.70	
Barracks and quarters	52,054.18		739.01	52,793.19		52,793.19	
Military post exchanges	3,376.65			3,376.65	195.80	3,180.85	
Transportation of the Army and its supplies	553,150.40			553,150.40	5,352.22	547,798.18	
Roads, walks, wharves, and drainage	28,181.39		1,381.15	29,562.54		29,562.54	
Water and sewers at military posts	146,173.81			146,173.81	14,151.61	132,022.20	
Clothing and camp and garrison equipage	149,230.78		10,621.50	159,852.28		159,852.28	
Construction and repair of hospitals	2,648.33		6,189.17	8,837.50		8,837.50	
Quarters for hospital stewards	384.55		78.55	463.10		463.10	
Shooting galleries and ranges	19,720.09		2,656.20	22,376.29		22,376.29	
Maintenance, Army War College	807.26			807.26		807.26	
Bureau of Insular Affairs:							
Care of insane Filipino soldiers	1,749.85			1,749.85		1,749.85	
Care of insane soldiers, Porto Rico Regiment of Infantry	716.00			716.00		716.00	
Medical Department:							
Medical and hospital department	599.40			599.40	218.50	380.90	
Replacing medical supplies	35.59			35.59		35.59	
Replacing medical supplies destroyed by fire			6.18	6.18		6.18	
Army Medical Museum	423.80			423.80		423.80	
Library, Surgeon General's office	121.33			121.33		121.33	
Engineer Department:							
Engineer depots	123.58			123.58		123.58	
Engineer School, Washington, D. C.	583.38			583.38		583.38	
Engineer equipment of troops	1,190.33			1,190.33		1,190.33	
Civilian assistants to engineer officers	716.50			716.50		716.50	
Contingencies, engineer department, Philippine Islands	21.06			21.06		21.06	
Ordnance Department:							
Ordnance service	2,752.40			2,752.40	138.15	2,614.25	
Ordnance stores, ammunition	66.33			66.33		66.33	
Small-arms target practice	260.07			260.07		260.07	
Blank ammunition, maneuver camps	3,239.68			3,239.68		3,239.68	
Manufacture of arms	479.83			479.83	40.64	439.19	
Ordnance stores and supplies	1,253.76			1,253.76		1,253.76	
National trophy and medals for rifle contests	.24			.24		.24	
Fire control in field batteries	13,131.20			13,131.20	13,126.13	5.07	
Automatic rifles	69,063.86			69,063.86	69,063.86		
Replacing ordnance and ordnance stores	764.04		1,597.10	2,361.14		2,361.14	
Total support of the Army	2,118,131.65	7,368.00	161,730.27	2,287,229.92	102,641.42	2,177,220.50	7,368.00
Less payments			102,641.42				
Repayments in excess of payments			59,088.85				

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1911 (1911), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1911, and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110)—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Military Academy.							
Pay of Military Academy	$43,232.72		$1,677.40	$44,910.12		$44,910.12	
Current and ordinary expenses, Military Academy	3,936.11			3,936.11	$6.00	3,930.11	
Miscellaneous items and incidental expenses, Military Academy	785.86			785.86		785.86	
Buildings and grounds, Military Academy	468.25			468.25		468.25	
Total Military Academy	48,422.94		1,677.40	50,100.34	6.00	50,094.34	
Less payments			6.00				
Repayments in excess of payments			1,671.40				
Organized Militia.							
Encampment and maneuvers, Organized Militia	3,999.72		4,288.18	8,287.90		8,287.90	
Equipment of Coast Artillery, Organized Militia	.37			.37		.37	
Total Organized Militia	4,000.09		4,288.18	8,288.27		8,288.27	
Summary Military Establishment.							
Support of the Army	2,118,131.65	$7,368.00	59,088.85	2,184,588.50		2,177,220.50	$7,368.00
Military Academy	48,422.94		1,671.40	50,094.34		50,094.34	
Organized Militia	4,000.09		4,288.18	8,288.27		8,288.27	
Total military establishment	2,170,554.68	7,368.00	65,048.43	2,242,971.11		2,235,603.11	7,368.00
PUBLIC WORKS—MILITARY.							
Arsenals.							
Ordnance Department:							
Rock Island power plant, Rock Island, Ill	192.45			192.45		192.45	
Rock Island bridge, Rock Island, Ill	5.82			5.82		5.82	
Testing machine	285.18			285.18		285.18	
Repairs of arsenals	1,142.05			1,142.05		1,142.05	
Total arsenals	1,625.50			1,625.50		1,625.50	

Military posts, etc.							
Quartermaster Corps:							
Sewerage system, Fort Monroe, Va	807.69			807.69		807.69	
Total military posts	807.69			807.69		807.69	
Summary public works—military.							
Arsenals	1,625.50			1,625.50		1,625.50	
Military posts, etc	807.69			807.69		807.69	
Total public works, military	2,433.19			2,433.19		2,433.19	
PUBLIC WORKS—CIVIL.							
Buildings and grounds in and around Washington.							
Engineer Department:							
Improvement and care of public grounds	59.36			59.36		59.36	
Improvement and care of public grounds, District of Columbia	12.26			12.26		12.26	
Repairs, fuel, etc., Executive Mansion	748.32			748.32		748.32	
Lighting, etc., Executive Mansion, etc	299.78			299.78		299.78	
Lighting public grounds, District of Columbia	1,110.24			1,110.24		1,110.24	
Repairs to building where Abraham Lincoln died	27.66			27.66		27.66	
Care and maintenance of Washington Monument	6.30			6.30		6.30	
Improvements birthplace of Washington, Wakefield, Va	55.75			55.75		55.75	
Total buildings and grounds in and around Washington	2,319.67			2,319.67		2,319.67	
Rivers and harbors.							
Engineer Department:							
Maintenance of South Pass Channel, Mississippi River	724.93			724.93		724.93	
Gauging waters of the Mississippi River and its tributaries	689.59			689.59		689.59	
Operating snag and dredge boats on upper Mississippi, Illinois, and Minnesota Rivers	569.85			569.85		569.85	
Operating snag boats on the Ohio River	14,647.84			14,647.84		14,647.84	
Total rivers and harbors	16,632.21			16,632.21		16,632.21	
Summary public works—civil.							
Buildings and grounds in and around Washington	2,319.67			2,319.67		2,319.67	
Rivers and harbors	16,632.21			16,632.21		16,632.21	
Total public works, civil	18,951.88			18,951.88		18,951.88	
Summary public works.							
Military	2,433.19			2,433.19		2,433.19	
Civil	18,951.88			18,951.88		18,951.88	
Total public works	21,385.07			21,385.07		21,385.07	

Statement of balances of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1911 (1911), showing the amounts drawn by requisition upon the Treasury during the fiscal year ending June 30, 1913 (1913), in settlement of outstanding liabilities created during the fiscal year 1911, and the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110)—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MISCELLANEOUS.							
National cemeteries.							
Quartermaster Corps:							
National cemeteries	$4,505.35			$4,505.35	$5.19	$4,500.16	
Pay of superintendents of national cemeteries	269.67			269.67		269.67	
Headstones for graves of soldiers	430.01		$1,415.81	1,845.82		1,845.82	
Repairing roads to national cemeteries	266.16			266.16		266.16	
Road to national cemetery, Mound City, Ill	190.94			190.94		190.94	
Antietam battlefield preservation	73.24			73.24		73.24	
Disposition of remains of officers, soldiers, and civil employees	7,210.07			7,210.07	272.61	6,937.46	
Total national cemeteries	12,945.44		1,415.81	14,361.25	277.80	14,083.45	
Less payments			277.80				
Repayments in excess of payments			1,138.01				
Miscellaneous objects.							
Medical Department:							
Artificial limbs	15,688.41			15,688.41		15,688.41	
Appliances for disabled soldiers	945.90			945.90		945.90	
Trusses for disabled soldiers	2,502.30			2,502.30		2,502.30	
Engineer Department:							
Expenses California Débris Commission	36.19			36.19		36.19	
Bridge across Mississippi River at Fort Snelling, Minn	449.63			449.63		449.63	
Maps, War Department	583.42			583.42		583.42	
Driveway, War Department branch printing office	2.20			2.20		2.20	
Prevention of deposits, harbor of New York	411.89			411.89		411.89	
Board of Managers, National Home for Disabled Volunteer Soldiers:							
National Home for Disabled Volunteer Soldiers	245,637.01			245,637.01	22.07	245,614.94	
National Sanitarium for Disabled Volunteer Soldiers, Hot Springs, S. Dak	21,573.76			21,573.76		21,573.76	
State or Territorial homes for disabled soldiers and sailors		$67,407.14		67,407.14	67,407.14		
Total miscellaneous objects	287,830.71	67,407.14		355,237.85	67,429.21	287,808.64	

War claims and relief acts.							
Arrears of pay, bounty, etc., certified claims	188.63		3.53	192.16		192.16	
Pay, etc., of the Army, War with Spain, certified claims	5.59			5.59		5.59	
Total war claims and relief acts	194.22		3.53	197.75		197.75	
Summary, miscellaneous.							
National cemeteries	12,945.44		1,138.01	14,083.45		14,083.45	
Miscellaneous objects	287,830.71	67,407.14		355,237.85	67,429.21	287,808.64	
War claims and relief acts	194.22		3.53	197.75		197.75	
Total miscellaneous	300,970.37	67,407.14	1,141.54	369,519.05	67,429.21	302,089.84	
Repayments in excess of payments					1,141.54		
Actual expenditures					66,287.67		
RECAPITULATION.							
Civil establishment	39,953.75			39,953.75		39,953.75	
Military establishment	2,170,554.68	7,368.00	65,048.43	2,242,971.11		2,235,603.11	$7,368.00
Public works	21,385.07			21,385.07		21,385.07	
Miscellaneous	300,970.37	67,407.14		368,377.51	66,287.67	302,089.84	
Total	2,532,863.87	74,775.14	65,048.43	2,772,687.44	66,287.67	2,599,031.77	7,368.00
Repayments in excess of payments					65,048.43		
Actual expenditures					1,239.24		

APPENDIX E.

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1910, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1913 (1913), the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1913.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT.							
Support of the Army.							
Secretary's Office:							
Contingencies of the Army—							
Certified claims		$0.85		$0.85	$0.85		
1910			$242.72	242.72		$242.72	
Office of the Chief of Staff:							
Contingencies, military information division, General Staff Corps, certified claims		10.50		10.50	10.50		
Coast Artillery School, Fort Monroe, Va., 1910			36.00	36.00		36.00	
Chief Signal Officer:							
Signal service of the Army, 1908			1.05	1.05		1.05	
Quartermaster Corps:							
Pay, etc., of the Army—							
Certified claims	$2,675.78	304,570.64		307,246.42	304,570.64	224.62	$2,451.16
1871 and prior years			883.53	883.53		883.53	
1880			3.02	3.02		3.02	
1889			50.00	50.00		50.00	
1895			7.78	7.78		7.78	
1899			143.02	143.02		143.02	
Jan. 1, 1899			200.00	200.00		200.00	
1907			1,654.48	1,654.48		1,654.48	
1908		1,479.25		1,479.25	1,478.12	1.13	
1909			2,112.93	2,112.93		2,112.93	
1910	9.57		3,777.56	3,786.93		3,786.93	
Pay in lieu of clothing, officers' servants, 1871 and prior years			2.50	2.50		2.50	
Extra duty pay to enlisted men as clerks, etc., at Army division and department headquarters—							
Certified claims		1,436.20		1,436.20	1,436.20		
Mileage to officers and contract surgeons—							
Certified claims		529.28		529.28	529.28		
1910			511.16	511.16		511.16	
Expenses of recruiting, 1871 and prior years			3,375.20	3,375.20		3,375.20	
Subsistence of the Army—							
Certified claims		3,453.00		3,453.00	3,453.00		
1877 and prior years			3,785.54	3,785.54		3,785.54	

1906			1.14	1.14		1.14	
1910			8.77	8.77		8.77	
Subsistence of officers, 1871 and prior years			477.67	477.67		477.67	
Purchase of stores, Quartermaster's Department, 1877 and prior years			20.00	20.00		20.00	
Regular supplies, Quartermaster's Department—							
Certified claims		14,645.36		14,645.36	7,673.20		6,972.16
1877 and prior years			1,219.55	1,219.55		1,219.55	
1908			1,500.00	1,500.00		1,500.00	
1909			5.00	5.00		5.00	
1910			20,620.82	20,620.82		20,620.82	
Equipment of officers' schools at military posts, 1910			71.15	71.15		71.15	
Incidental expenses, Quartermaster's Department—							
Certified claims		157.04		157.04	157.04		
1877 and prior years			99.63	99.63		99.63	
1907			2.38	2.38		2.38	
1908			4.00	4.00		4.00	
1909			4.00	4.00		4.00	
1910			8,517.17	8,517.17		8,517.17	
Horses for Cavalry, Artillery, and Engineers, certified claims		378.38		378.38	378.38		
Barracks and quarters—							
Certified claims		4,683.96		4,683.96	4,683.96		
1877 and prior years			8.00	8.00		8.00	
1910			361.10	361.10		361.10	
Military post exchanges—							
Certified claims		245.28		245.28	245.28		
1910			1,618.61	1,618.61		1,618.61	
Transportation of the Army and its supplies—							
Certified claims		56,289.90		56,289.90	56,289.90		
1877 and prior years			135.38	135.38		135.38	
1906			8.53	8.53		8.53	
1907			99.50	99.50		99.50	
1908			47.63	47.63		47.63	
1909			984.62	984.62		984.62	
1910			48,655.50	48,655.50		48,655.50	
Roads, walks, wharves, and drainage, 1910			8.38	8.38		8.38	
Water and sewers at military posts—							
Certified claims		2,267.62		2,267.62	2,267.62		
1910			7,577.87	7,577.87		7,577.87	
[illegible] camp and garrison equipage—							
Certified claims		410.71		410.71	410.71		
1877 and prior years			4.20	4.20		4.20	
[illegible]			206.19	206.19		206.19	
[illegible]			22.73	22.73		22.73	
[illegible]			2,046.91	2,046.91		2,046.91	
Construction and repair of hospitals, 1910			541.11	541.11		541.11	
[illegible] for hospital stewards, 1910			783.60	783.60		783.60	
Shooting galleries and ranges, 1910			21.44	21.44		21.44	
Medical Department:							
Medical and hospital department, certified claims		66.35		66.35	66.35		

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1910, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1913 (1913), the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1913—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MILITARY ESTABLISHMENT—Continued.							
Support of the Army—Continued.							
Ordnance Department:							
Ordnance, 1871 and prior years			$13.48	$13.48		$13.48	
Replacing ordnance and ordnance stores, certified claims		$185.93		185.93	$185.93		
Engineer Department:							
Engineer depots, certified claims		28.95		28.95	28.95		
Total support of the Army	$2,685.35	390,839.20	112,574.35	506,098.90	383,865.91	112,809.67	$9,423.32
Repayments in excess of payments					112,574.35		
Actual expenditures					271,291.56		
Military Academy.							
Current and ordinary expenses, Military Academy, certified claims		158.50		158.50	158.50		
Total Military Academy		158.50		158.50	158.50		
Organized Militia.							
Encampment and maneuvers, Organized Militia, certified claims		82.00		82.00	82.00		
Arms, uniforms, equipment, etc., Organized Militia—							
1909		285.93		285.93	285.93		
1910		168.72		168.72	168.72		
Total Organized Militia		536.65		536.65	536.65		
Summary Military Establishment.							
Support of the Army	2,685.35	390,839.20		393,524.55	271,291.56	112,809.67	9,423.32
Military Academy		158.50		158.50	158.50		
Organized Militia		536.65		536.65	536.65		
Total Military Establishment	2,685.35	391,534.35		394,219.70	271,986.71	112,809.67	9,423.32

PUBLIC WORKS—MILITARY.							
Arsenals.							
Ordnance Department:							
Arsenals, 1871 and prior years			2.47	2.47		2.47	
Total arsenals			2.47	2.47		2.47	
PUBLIC WORKS—CIVIL.							
Rivers and harbors.							
Engineer Department:							
Removing obstructions in Mississippi River, certified claims		4.67		4.67	4.67		
Total rivers and harbors		4.67		4.67	4.67		
Summary public works.							
Military			2.47	2.47		2.47	
Civil		4.67		4.67	4.67		
Total public works		4.67	2.47	7.14	4.67	2.47	
Repayments in excess of payments					2.47		
Actual expenditures					2.20		
MISCELLANEOUS.							
National cemeteries.							
Quartermaster Corps:							
National cemeteries, certified claims		4.08		4.08	4.08		
Headstones for graves of soldiers, certified claims		39.28		39.28	39.28		
Burial of indigent soldiers, certified claims		40.00		40.00	40.00		
Bringing home remains of officers, soldiers, and civil employees, 1910			125.06	125.06		125.06	
Total national cemeteries		83.36	125.06	208.42	83.36	125.06	
Less payments			83.36				
Repayments in excess of payments			41.70				
Miscellaneous objects.							
Medical Department:							
Artificial limbs, certified claims		75.70		75.70	75.70		
Board of Managers, National Home for Disabled Volunteer Soldiers:							
National Home for Disabled Volunteer Soldiers—							
Central Branch, certified claims		12.75		12.75	12.75		
Northwestern Branch, certified claims		2.93		2.93	2.93		
Eastern Branch, certified claims		9.62		9.62	9.62		
Southern Branch, certified claims		17.05		17.05	17.05		
Total miscellaneous objects		118.05		118.05	118.05		

Statement of appropriations made by Congress for the use of the War Department for the fiscal year ending June 30, 1910, and prior years, showing the amounts paid out of the Treasury by requisition or Treasury settlement during the fiscal year ending June 30, 1913 (1913), the amounts covered into the surplus fund of the Treasury by operation of law (18 Stat., 110), and the balances remaining in the Treasury on June 30, 1913—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
MISCELLANEOUS—Continued.							
War claims and relief acts.							
Pay of 2 and 3 year volunteers, 1871 and prior years			$545.57	$545.57		$545.57	
Pay of volunteers, Cayuse Indian War in 1847 and 1848 in Oregon, certified claims	$912.98	$582.85		1,495.83	$387.00		$1,108.83
Suppressing hostilities of Piute Indians in Nevada in 1860	2,980.00			2,980.00			2,980.00
Relief of sufferers from flood in Allegheny River in 1907		17,577.88		17,577.88	17,012.08		565.80
Commutation of quarters to paymaster's clerk, act Mar. 3, 1911, certified claims		194.40		194.40	194.40		
Mexican hostilities, certified claims		345.05		345.05	256.94	88.11	
Pay of volunteers, Mexican War, certified claims		8.10		8.10	8.10		
Capture of Jefferson Davis, certified claims		293.00		293.00	293.00		
Horses and other property lost in the military service, certified claims		175.00		175.00	175.00		
Collecting, drilling, and organizing volunteers, certified claims		84.93		84.93	34.93	50.00	
Bounty to volunteers and regulars on enlistment, certified claims		17.08		17.08	17.08		
Total war claims and relief acts	3,892.98	19,278.29	545.57	23,716.84	18,378.53	683.68	4,654.63
Repayments in excess of payments					545.57		
Actual expenditures					17,832.96		
Summary miscellaneous.							
National cemeteries		83.36	41.70	125.06		125.06	
Miscellaneous objects		118.05		118.05	118.05		
War claims and relief acts	3,892.98	19,278.29		23,171.27	17,832.96	683.68	4,654.63
Total miscellaneous	3,892.98	19,479.70	41.70	23,414.38	17,951.01	808.74	4,654.63
Repayments in excess of payments					41.70		
Actual expenditures					17,909.31		
RECAPITULATION.							
Military Establishment	2,685.35	391,534.35		394,219.70	271,986.71	112,809.67	9,423.32
Public works		4.67		4.67	2.20	2.47	
Miscellaneous	3,892.98	19,479.70		23,372.68	17,909.31	808.74	4,654.63
Total	6,578.33	411,018.72		417,597.05	289,898.22	113,620.88	14,077.95

SUMMARY.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
Civil establishment:							
Fiscal year 1913	$454.06	$2,043,425.58		$2,043,879.64	$1,942,653.91		$101,225.73
Fiscal year 1912	36,606.63		$3,333.41	39,940.04			39,940.04
Fiscal year 1911	39,953.75			39,953.75		$39,953.75	
Total civil establishment	77,014.44	2,043,425.58	3,333.41	2,123,773.47	1,942,653.91	39,953.75	141,165.77
Repayments in excess of payments					3,333.41		
Actual expenditures					1,939,320.50		
Military establishment:							
Support of the Army—							
Fiscal year 1913	4,915,103.87	*1,000.80* 92,158 272.25		97,074,376.92	*10,000.00* 89,047,671.94		8,016,704.98
Fiscal year 1912	6,419,783.50	2,451,963.41		8,871,746.91	*176,000.80* 6,514,477.04		2,181,269.07
Fiscal year 1911	2,118,131.65	7,368.00	59,088.85	2,184,588.50		2,177,220.50	7,368.00
Fiscal year 1910 and prior years	2,685.35	390,839.20		393,524.55	271,291.56	112,809.67	9,423.32
Total support of the Army	13,455,704.37	*1,000.80* 95,008,442.86	59,088.85	108,524,236.88	*186,000.80* 95,833,440.54	2,290,030.17	10,214,765.37
Repayments in excess of payments					59,088.85		
Actual expenditures					95,774,351.69		
Military Academy—							
Fiscal year 1913	307,303.85	1,174,168.26		1,481,472.11	1,240,508.25		240,963.86
Fiscal year 1912	9.21	40,000.00		40,009.21	22,083.61		17,925.60
Fiscal year 1911	48,422.94		1,671.40	50,094.34		50,094.34	
Fiscal year 1910 and prior years		158.50		158.50	158.50		
Total Military Academy	355,736.00	1,214,326.76	1,671.40	1,571,734.16	1,262,750.36	50,094.34	258,889.46
Repayments in excess of payments					1,671.40		
Actual expenditures					1,261,078.96		

SUMMARY—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
Military establishment—Continued.							
Militia—							
Fiscal year 1913	$1,946,476.21	$7,582,537.32		$9,529,013.53	$4,973,442.39		$4,555,571.14
Fiscal year 1912	262,216.07	785,585.77		1,047,801.84	974,775.82		73,026.02
Fiscal year 1911	4,000.09		$4,288.18	8,288.27		$8,288.27	
Fiscal year 1910 and prior years		536.65		536.65	536.65		
Total militia	2,212,692.37	8,368,659.74	4,288.18	10,585,640.29	5,948,754.86	8,288.27	4,628,597.16
Repayments in excess of payments					4,288.18		
Actual expenditures					5,944,466.68		
Total military establishment	16,024,132.74	*1,000.80* 104,591,429.36		120,616,562.90	*186,000.80* 102,979,897.33	2,348,412.78	15,102,251.99
Public works—military:							
Fortifications fiscal year 1913	6,716,191.10	*8,992.00* 9,391,325.60		16,116,508.70	4,415,435.20		11,701,073.50
Arsenals—							
Fiscal year 1913	156,074.00	359,950.00		516,024.00	419,743.01		96,280.99
Fiscal year 1912	61,146.18			61,146.18	59,306.07		1,840.11
Fiscal year 1911	1,625.50			1,625.50		1,625.50	
Fiscal year 1910 and prior years			2.47	2.47		2.47	
Total arsenals	218,845.68	359,950.00	2.47	578,798.15	479,049.08	1,627.97	98,121.10
Repayments in excess of payments					2.47		
Actual expenditures					479,046.61		
Military posts, etc.—							
Fiscal year 1913	705,105.97	*185,000.00* 329,424.98		1,219,530.95	*8,992.00* 507,683.91	37,768.48	665,086.56
Fiscal year 1911	807.69			807.69		807.69	
Total military posts, etc	705,913.66	*185,000.00* 329,424.98		1,220,338.64	*8,992.00* 507,683.91	38,576.17	665,086.56
Total public works—military	7,640,950.44	*193,992.00* 10,080,700.58		17,915,643.02	*8,992.00* 5,402,165.72	40,204.14	12,464,281.16

Public works—civil:							
Military parks, etc., fiscal year 1913	24,388.19	560,060.00		584,448.19	484,506.68	146.09	99,795.42
Buildings and grounds in and around Washington—							
Fiscal year 1913		282,990.00		282,990.00	281,888.13		1,101.87
Fiscal year 1912	147.67		819.00	966.67			966.67
Fiscal year 1911	2,319.67			2,319.67		2,319.67	
Total buildings and grounds in and around Washington	2,467.34	282,990.00	819.00	286,276.34	281,888.13	2,319.67	2,068.54
Repayments in excess of payments					819.00		
Actual expenditures					281,069.13		
Monuments, fiscal year 1913	269,613.39	45,200.00		314,813.39	78,528.55	360.03	235,924.81
Rivers and harbors—							
Fiscal year 1913	37,036,157.13	84,353,339.05		121,389,496.18	41,330,670.66	392,177.84	79,666,647.68
Fiscal year 1912	50,979.97		172.96	51,152.93			51,152.93
Fiscal year 1911	16,632.21			16,632.21		16,632.21	
Fiscal year 1910 and prior years		4.67		4.67	4.67		
Total rivers and harbors	37,103,769.31	84,353,343.72	172.96	121,457,285.99	41,330,675.33	408,810.05	79,717,800.61
Repayments in excess of payments					172.96		
Actual expenditures					41,330,502.37		
Total public works—civil	37,400,238.23	85,241,593.72		122,641,831.95	42,174,606.73	411,635.84	80,055,589.38
Total public works	45,041,188.67	*193,992.00* 95,322,294.30		140,557,474.97	*8,992.00* 47,576,772.45	451,839.98	92,519,870.54
Miscellaneous:							
National cemeteries—							
Fiscal year 1913	56,463.20	*263.00* 362,535.00		419,261.20	292,473.79	162.07	126,625.34
Fiscal year 1912	51,213.91			51,213.91	*263.00* 22,070.45		28,880.46
Fiscal year 1911	12,945.44		1,138.01	14,083.45		14,083.45	
Fiscal year 1910 and prior years		83.36	41.70	125.06		125.06	
Total national cemeteries	120,622.55	*263.00* 362,618.36	1,179.71	484,683.62	*263.00* 314,544.24	14,370.58	155,505.80
Repayments in excess of payments					1,179.71		
Actual expenditures					313,364.53		

SUMMARY—Continued.

Title of appropriations.	Balances July 1, 1912.	Appropriated July 1, 1912, to June 30, 1913.	Repayments July 1, 1912, to June 30, 1913.	Aggregate available.	Payments July 1, 1912, to June 30, 1913.	Carried to surplus fund June 30, 1913.	Balances June 30, 1913.
Miscellaneous—Continued.							
Miscellaneous objects—							
Fiscal year 1913	$427,872.99	$6,023,003.55		$6,450,876.54	*$1.23* 6,097,766.63	$18,372.92	$334,735.76
Fiscal year 1912	304,835.20	*1.23* 39,510.12		344,346.55	93,389.90		250,956.65
Fiscal year 1911	287,830.71	67,407.14		355,237.85	67,429.21	287,808.64	
Fiscal year 1910 and prior years		118.05		118.05	118.05		
Total miscellaneous objects	1,020,538.90	*1.23* 6,130,038.86		7,150,578.99	*1.23* 6,258,703.79	306,181.56	585,692.41
War claims and relief acts—							
Fiscal year 1913	1,092,571.84	765,443.37		1,858,015.21	754,587.84	789,397.26	314,030.11
Fiscal year 1912	5,754.25			5,754.25	2,189.81		3,564.44
Fiscal year 1911	194.22		$3.53	197.75		197.75	
Fiscal year 1910 and prior years	8,892.98	19,278.29		23,171.27	17,832.96	683.68	4,654.63
Total war claims and relief acts	1,102,413.29	784,721.66	3.53	1,887,138.48	774,610.61	790,278.69	322,249.18
Repayments in excess of payments					3.53		
Actual expenditures					774,607.08		
Total miscellaneous	2,243,574.74	*264.23* 7,277,378.88		9,521,217.85	*264.23* 7,346,675.40	1,110,830.83	1,063,447.39
RECAPITULATION.							
Civil establishment	77,014.44	2,043,425.58		2,120,440.02	1,939,320.50	39,953.75	141,165.77
Military establishment	16,024,132.74	104,591,429.36		120,615,562.10	*185,000.00* 102,979,897.33	2,348,412.78	15,102,251.99
Public works	45,041,188.67	*185,000.00* 95,322,294.30		140,548,482.97	47,576,772.45	451,839.98	92,519,870.54
Miscellaneous	2,243,574.74	7,277,378.88		9,520,953.62	7,346,675.40	1,110,830.53	1,063,447.39
Total	63,385,910.59	*185,000.00* 209,234,528.12		272,805,438.71	*185,000.00* 159,842,665.68	3,951,037.34	108,826,735.69

APPENDIX F.

RETIREMENT OF CIVIL-SERVICE EMPLOYEES.

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I. PRELIMINARY STATEMENT—HISTORY.

The recognition of the necessity for retirement appears to have originated with the Civil Service Commission, which called attention to the matter in its annual reports for 1893 and 1894, and repeatedly treated the subject in its subsequent reports, particularly in those for 1902, 1903, 1905, and 1908. Almost contemporaneously the movement found general support in the recommendations of bureau and department heads. In the annual reports of the Secretary of the Interior for the years 1904, 1905, 1908, 1909, 1910, 1911, and 1912 the subject has received particular attention, and the annual reports of the other heads of departments since 1909 have set forth the pressing need of some general plan of retirement of superannuated employees, both as a matter of justice to the employees and in the interests of the efficiency of the service. Reference may be made particularly to the annual reports for 1911 by the Secretary of the Treasury (p. 7), the Secretary of War (p. 33), the Postmaster General (p. 15), and the Secretary of the Interior (p. 17).

In respect to the War Department, Secretary Dickinson, in his annual report for 1909, recommended that some provision be made for retirement on annuities of employees who become superannuated in the service; and in his annual report for 1910 he renewed this recommendation, inviting attention to extracts from the annual report of the several bureau chiefs setting forth the need that some measures be taken to provide for the retirement of superannuated members of the civil service. Secretary Stimson, in his annual report for 1911, urged that provision be made for the retirement of superannuated employees, using the following language:

"While I am not prepared to express a decided conviction as between a straight-out Government pension and one to which the employee himself shall have contributed a portion, there is abundant proof that the Government, in effect, though indirectly, has for many years throughout its service maintained a pension system without retirement, and if it should now establish a pension system with retirement there is good reason to believe that in the long run it would not only suffer no pecuniary loss, but on the contrary would repay a substantial gain in the increased efficiency and improved morale of the service."

In his annual report for 1912 Secretary Stimson renewed this recommendation, expressing his regret of the attack on the retirement plan involved in the effort to establish a limited tenure of office, adding:

"I believe the effect of such legislation would have been to overthrow the merit system. The tendency of the merit system, as established by the civil-service law, is to make service in the classified positions under the Government a life work or profession, and some sort of retirement is necessary, just as it is in the Army, the Navy, the judiciary, if the best results are to be secured."

President Taft, in his annual message to Congress in 1909, under the caption of "reduction in cost of governmental administration," recommended legislation for the retirement of civil-service employees, coupling with it a recommendation for an increase in salary to meet the increased cost of living. In the following year he renewed the recommendation, referring to the Gillett bill (H. R. 22013, 62d Cong., 2d sess.) as the one in his judgment best calculated to solve satisfactorily the problem and in his message to Congress, December 21, 1911, he said:

"I have already advocated in my last annual message the adoption of a civil service retirement system, with the contributory features added to it, so as to reduce to a minimum the cost to the Government of the pensions to be paid. After considerable reflection I am very much opposed to a pension system that involves no contribution from the employees. I think the experience of other Governments justifies this view, but the crying necessity for some such contributory system, with possibly a governmental outlay in order to cover the initial cost, and to start the system going at once while the contributions are accumulating, is manifest on every side. Nothing will so much promote the economy and efficiency of the Government as such a system."

In his message to Congress dated March 6, 1912, the President transmitted a report of the Commission on Economy and Efficiency on the subject of retirement of superannuated employees in the classified service, with the statement that the plan proposed in the report of the commission had his "unqualified approval," because he believed it to be "sound in principle and just to the Government employees."

On February 18, 1908, the special committee on personnel of the Keep Commission (a commission appointed by the President June 2, 1905, on business methods in the executive departments), after careful consideration of this subject, presented a plan for the retirement of superannuated employees on the basis of monthly deductions from the salary of each employee to provide a fund for the purchase of an annuity on his retirement. More recently the subject has received thorough consideration by the President's Commission on Economy and Efficiency.

Responsive presumably to the recommendations of the Civil Service Commission, the bureau and department heads, the recommendation of the Keep Commission and of the President, the matter has received consideration at the hands of Members and committees of Congress. Since 1903 no less than 50 bills have been introduced in Congress for the retirement of the employees of the civil service; and the matter has been the subject of repeated hearings before committees of Congress.

II. PLANS FOR RETIREMENT.

Consulting the recommendations referred to above and the legislation introduced we find that the plans for retirement of civil-service employees which have been proposed or considered may be divided into three classes, as follows:

(*a*) The common-fund plan, providing for uniform deductions of a given per cent of the salaries of employees for the creation of a common fund from which all employees on retiring at the age of 70 shall receive annuities—the amount of the annuity to be based either on length of service or a uniform annuity regardless of service.

(*b*) A straight pension plan, proposing retirement on annuities to be paid out of the Federal Treasury.

(*c*) The savings-fund plan, whereby the contributions of each employee are credited, with compound interest at the authorized rate, to his individual account, the amount of such deductions with interest to be used to purchase from the Government an annuity on retirement or to be withdrawn by himself or his representatives in case of his separation from the service by resignation, death, etc.

A—*Common-fund plan.*

This plan has been suggested in the general discussion of the subject, but has never been proposed by any department or embodied in any bill before Congress. It is open to the serious objection that it is unjust to the younger employees, since it requires them to set aside a much larger per cent of their salaries in order to create the fund for the older men than would be necessary to provide annuities for themselves alone. The defect in this plan is apparent to every one conversant with the subject, and is very clearly set forth in the report of the National Civil Service Reform League, as follows:

"In general, any plan of uniform or 'flat-rate' assessment, to begin practically at once to take care of the aged, does a great injustice to the younger employees. The old will receive support after they have paid but a few years, and can pay but a few years more even if assessments are continued on the retired receipts. The young will have to pay a much larger sum from their salaries than would be required for their old age alone. If, by any chance, the fund should prove to be too small, that would transpire only many years hence, when those now aged would have received their full allowances and passed from the stage. The others, the present younger employees, who would have borne the great brunt of expensive assessments, would thus be the ones to suffer, unless the Government made up the deficiency."

A plan of this kind was in force in England from 1822 to 1859, when the service became dissatisfied with the plan because of its inequitable provisions, and it was superseded by the straight pension plan, which has been in force since 1859.

Neither the Keep Commission nor the Commission on Economy and Efficiency have favored this plan nor has any legislation been introduced on this plan; and *it may be dismissed without further consideration.*

B—*The straight pension plan.*

This plan has been favored by a number of the employees of the Government (most recently by the National Association of Civil Service Employees, mainly an association of letter carriers, organized April 5, 1913), for the reason that it would call for no contribution from their salaries. But the plan is opposed by the United States Civil Service Retirement Association, which has placed itself on record as favoring the savings fund plan with an increase in salary based on the increased cost of living. It was given legislative expression in the Hamill bill (H. R. 9242, 62d Cong., 1st sess.). reintroduced April 17, 1913, by Mr. Carey (H. R. 2922, 63d Cong., 1st sess.); in the Peters bill (H. R. 11661, 62d Cong., 1st sess.); the new Hamill bill, introduced May

15, 1913, as H. R. 5139 (63d Cong., 1st sess.); and the Penrose bill, introduced May 19, 1913, by Senator Penrose (S. 2203, 63d Cong., 1st sess.). All of these bills are drafted on the straight pension plan and their leading features are as follows:

(1) Retirement authorized after service—

(*a*) Thirty years or more (at the age of 60 years or over), at 50 per cent of average salary for last five years.

(*b*) Twenty-five years or more but less than 30 years (at age of 62 or over), at 45 per cent of average salary for last five years.

(*c*) Twenty years or more of service but less than 25 years (at age of 65 or over), at 40 per cent of average salary for last five years.

(2) Retirement for disability after not less than five years of service—From 5 to 10 years of service, 30 per cent; from 10 to 20 years of service, 40 per cent; 21 years and upward, 50 per cent.

The objections to this plan are that it would be very expensive to the Government as compared to the savings fund plan; and, moreover, the right conferred by law to retirement at the prescribed age would probably be regarded as part of the compensation of the employee, giving him if he should leave the service before reaching the age of retirement, a claim to a gratuity proportional to the length of service as compared with the service required by retirement; and giving his legal representatives the same right. Such has been the experience in England where the system has been in force since 1859, and recently a change of the plan has been under consideration in that country—the service being dissatisfied with the plan partly on the ground that the plan has resulted in relatively lower salaries than obtain in those parts of the service to which it is not applicable. The comparative cost of the straight pension plan and the savings fund plan is given on pages 28 to 32 of the report of the Commission on Economy and Efficiency to the President dated April 18, 1912, and submitted to Congress by message of the President dated May 6, 1912. In addition to the excessive cost of the straight pension plan, it may be observed that the plan would make the dismissal of any inefficient employee difficult, since the employee would not only lose his position but also the benefit of the accrued service toward his retirement. In view of the public sentiment against a civil pension list, and the large expenditure which would be involved in the adoption of such a plan, it is not believed that there would be any prospect for favorable action on any bill providing for retirement of employees on annuities payable out of the Federal Treasury.

C—*Savings-fund plan.*

This plan was proposed by the subcommittee on personnel of the President's Committee on Departmental Methods known as the "Keep Commission"; and a bill drawn up to embody the plan after modification of the features was introduced in Congress on February 18, 1908, by Hon. Joseph A. Goulden as H. R. 17969, Sixtieth Congress, first session. The objections to this bill by the National Civil Service Reform League were met by a bill introduced on March 10, 1908, by Hon. Frederick H. Gillett and known as H. R. 18982, Sixtieth Congress, first session. As the result of the hearings on these bills in the spring of 1908 a third bill was introduced by Mr. Gillett on April 20, 1908, and known as H. R. 21261 (60th Cong., 1st sess.) At the second session of the Sixtieth Congress, on February 23, 1909, the House Committee on Reform in the Civil Service reported favorably a bill which was known as H. R. 28286; and at the same session a bill was introduced in the Senate on April 21, 1909, by Senator Perkins, known as S. 1944, which is substantially identical with the Gillett bill. At the second session of the Sixty-first Congress another bill (H. R. 22013) was introduced by Mr. Gillett and *was favorably reported by the House committee on April 4, 1910,* and at the first session of the Sixty-second Congress Mr. Gillett introduced H. R. 750, differing in minor particulars from his prior bill. At the same session the Austin bill (H. R. 729) was introduced by the Hon. Richard W. Austin. It is based on the same principles as the Gillett and Perkins bills as to superannuation, but provides in addition for an increase in salaries of about 15 per cent.

The essential features of this plan are found in the Gillett and Austin bills now pending, respectively, as H. R. 3336 (63d Cong., 1st sess.) and H. R. 196 (63d Cong., 1st sess.), and are as follows:

(1) *Deductions for annuities.*—Gillett bill: Of such amount monthly, as with 4 per cent interest compounded annually, will provide an annuity of 1½ per cent of salary for every full year or major fraction thereof of service between passage of act and date of retirement—the same to be credited to the individual account of the employee and to be invested as provided in the bill.

Austin bill: Same, except that deductions draw 5 per cent instead of 4 per cent.

(2) *Retirement age.*—Sixty-five years for groups 1 and 2; 70 years for group 3, which comprises the general departmental service.

Until July 1, 1920, the employee may be retained in active service after age of retirement for two-year periods, renewable upon certificate of head of department as to his efficiency and willingness to be retained—with deductions of 10 per cent to be treated as other deductions.

(These provisions are common to the Austin and Gillett bills.)

(3) *Upon retirement at authorized age, fund may be used or withdrawn as follows:*

Option 1: To purchase annuity payable quarterly for life.

Option 2: To purchase smaller annuity payable quarterly for life, with provision that any balance of savings not withdrawn in annuities prior to death shall be payable to his legal heirs.

Option 3: May be withdrawn in one sum.

(These provisions are common to the Austin and Gillett bills.)

(4) *Upon separation prior to retirement,* may withdraw savings and, if in the service six years or more, with compound interest at the authorized rate; in case of death before retirement savings and interest at authorized rate are payable to legal heirs.

(These provisions are common to the Austin and Gillett bills.)

(5) *Retirement for disability* (Austin bill; none in Gillett bill).—Austin bill (secs. 8 and 9) provides for retirement from fund created by assessments (1) of 20 per cent of monthly pay on each new employee for first six months of service and (2) of increased amount of pay on promotion for three months.

The amount of the annuity on retirement for disability to be 1½ per cent of total compensation during service prior to such retirement, but shall not be less than 20 per cent of the average annual compensation prior to retirement. The allowance for disability due to illness shall only be granted after 20 years of service.

(6) *On reinstatement after separation* the employee shall be regarded as a new appointee unless he refunds savings and interest within 90 days after reinstatement.

(This provision is common to the Austin and Gillett bills).

(7) *On retirement the annuity based on the savings to be supplemented* (as to employees now in the service) by a contribution by the Government of 1½ per cent of total compensation of the employee prior to the passage of the act, etc.

(This provision is common to the Austin and Gillett bills; but the Gillett bill limits the annuity, where contribution by the Government is required, to $600.)

(8) *Increase of pay.*—The Austin bill provides in section 1 for an increase in salary of about 15 per cent. The Gillett bill contains no such provision, but is accompanied by the Gillett reclassification bills (H. R. 1298, 62d Cong., 1st sess.; H. R. 3332, 63d Cong., 1st sess.), which are intended to readjust salaries in accordance with the character of work performed and, it is understood, to provide for some increase of salary based on the increased cost of living.

The plan proposed in the Austin bill was indorsed by the United States Civil Service Retirement Association at its annual meeting May 16, 1912, and the National Federation of Post Office Clerks have also expressed themselves as favoring the saving-fund plan system as compared with a straight pension plan.

All the bills submitted for retirement on the savings-fund plan are modifications of the plan originally proposed by the Keep Commission, appointed by the President June 2, 1905, as stated above, and which commission went out of existence after submitting its report in 1907. Under authority of the act of Congress approved June 25, 1910 (36 Stat., 703), making an appropriation to enable the President to inquire into the methods of transacting the public business of the Government in the several Executive Departments, etc., the President appointed a "Commission on Economy and Efficiency" which considered this subject and submitted its report to the President April 18, 1912, accompanied by the draft of a bill for the retirement of employees of the classified service in the Executive Departments and independent government establishments in the District of Columbia. The President transmitted this plan to Congress with his message of May 6, 1912, as having his "unqualified approval." The following statement will give the salient features of this plan:

(*a*) Deduction of such amount monthly (not to exceed 8 per cent in the case of employees now in the service), as, with 4 per cent, compounded annually, will purchase on retirement at the age of 70 years an annuity payable quarterly throughout life of one-half of his average pay during his service, provided that the annuity shall not exceed a maximum of $600. The deductions with interest to be credited to the individual account of the employee, and to be invested as provided in the bill.

(*b*) Retirement age, 70 years. No employee to remain in the service after that age.

(*c*) Upon retirement at authorized age the employee shall receive an annuity payable quarterly equal to one-half of his average annual salary, but not to exceed a maximum of $600. In case of death after retirement and prior to receipt in annuities of sums equal to the amount of his savings, the balance to his credit to be paid to his legal representatives.

(*d*) Upon absolute separation from the service prior to age of retirement—prior to the age of 60 years—may withdraw savings and accrued interest in one sum. In case of death while in service savings with interest payable to legal representatives.

Upon separation after reaching the age of 60 but prior to retirement, entitled to receive amount of savings with accrued interest in one payment, *but if amount exceeds $600* fund to be withdrawn in 10 annual installments, with interest on each installment. In case of death after such separation balance payable to his legal representatives.

(*e*) On reinstatement, employee treated as a new entrant in the service unless he refunds amount with interest, in which event it shall be placed to his credit and the former period of service counted.

(*f*) Employees having reached the age of retirement on July 1 following the passage of the act to be retired for the remainder of their lives on annuity payable quarterly equal to half of average annual salary for last five years, but not to exceed a maximum of $600 and to cease and determine at his death.

(*g*) Employees now in the service, on reaching the age of retirement, to be retired on one-half of average annual salary during service, but not to exceed a maximum of $600; on the death of such employee after retirement the annuity shall cease and determine, provided in case that he shall not have received in annuities sums equal to the amounts of his account, with interest, the balance remaining to his credit shall be paid to his legal representatives.

The plan proposed by the President's Commission on Economy and Efficiency is limited, as stated above, to the classified service in the District of Columbia, while the Gillett and Austin bills cover the entire classified service. Like the Gillett bill it limits the annuity, where contribution by the Government is required, to $600; but it goes further and limits the annuity to $600, even where paid wholly from the contributions by the employee. Regarding the limitation to the classified service in the District of Columbia, the President said:

"I am convinced that the application of the plan should be limited to the classified civil service in the executive departments and offices at Washington, *where the loss from superannuation is greatest.* While any plan is in its experimental state it should be kept within narrow limits. If successful in operation in Washington, it can be extended as the needs of the service require."

III. LEADING FEATURES OF THE SAVINGS-FUND PLAN.

It will now be convenient to consider briefly the leading features of the several bills and drafts of bills for retirement on the savings-fund plan, as follows:

(1) *Retirement age.*—The age for retirement for the departmental service has been fixed in the several bills for retirement and in the plans submitted by the President's Commission on Economy and Efficiency at 70 years (pp. 41, 42, and 53); and the plan submitted by the commission provides for compulsory retirement of the employee at that age. The Austin and Gillett bills provide that until July 1, 1920, an employee may be retained in active service for 2-year periods, renewable, on certificate of the head of the department as to the efficiency of the employee and his willingness to serve, with deductions of 10 per cent of his salary for the fund from which to purchase his annuity on retirement. It is understood that the principal purpose of this provision is to lessen the expense to the Government of putting the retirement plan into operation. (In the railway mail and carrier branches of the postal service the proposed age for retirement is 65 years.) The Commission on Economy and Efficiency gave their reason for recommending retirement at the age of 70, without exceptions, to be that "the benefit to the service from the establishment of a retirement plan may begin at once"; that the "improved efficiency of the service is desired now, not a generation hence." While there may be exceptional cases where the employee will retain his efficiency with little impairment after reaching the age of 70 years, it is believed that some age should be fixed as the one when the employee must retire, and the age of 70 appears to be the age at which, except in rare cases, the efficiency becomes sufficiently impaired to call for retirement. In some cases, however, the impaired efficiency of the employee may become apparent at an earlier age and the scheme of retirement should, it is believed, make provision for such cases by allowing retirement between the ages of 65 and 70 years, particularly where this can be done without additional cost to the Government. It would seem, therefore, that the plan proposed by the commission should be modified so as to permit of retirement between the ages of 65 and 70 years on such annuities as the funds to the credit of the particular employee may be able to purchase.

(2) *Amount of annuity.*—Under the plans covered by a number of the bills which have been introduced in Congress, the amount of the annuity has been fixed at 1½ per cent of the average salary of the employee *for each year of service,* which would amount in the case of an employee entering the service at the age of 20 and retiring at the age of 70 to 75 per cent of his average salary. On the other hand, the plan submitted by the President's Commission on Economy and Efficiency fixed the amount of the annuity at one-half of the average salary of the employee, *with the maximum limit of $600.* The reason for so low a maximum limit is stated by the commission to be that in the view of the commission the only interest the Government has in cooperating in the establishment of a retirement plan is to relieve itself from inefficiency due to superannuation by providing for retirement at a given age, under conditions which make the destitution of the employee impossible; that the Government has, on the one hand, little, if any interest in compelling its employee to save money, and that on the other hand, it can not properly require him to make an investment which may be less profitable than he can make himself. This view does not make any allowance for the difference in the manner of living to which employees in receipt of different salaries have become accustomed, so that while it may be a sufficient provision for an employee who on retirement has for a number

of years been in receipt of a salary of $1,200, to retire on half his salary, it would be a comparative hardship for an employee who for a number of years has been in receipt of $2,400 to retire on the same amount, or one-fourth of his salary. Where the expense of the retirement is borne by the employee, it is believed that the plan should provide for a somewhat larger maximum, leaving $600 as the maximum where the *annuity is payable wholly or in part by the Government;* that is, in respect to employees now in the service. It is believed, therefore, that the annuity should be fixed at one-half of the salary, with a maximum limit of $900, or one-half of the salary of $1,800. The plan should provide, however, as already stated, that where the annuity is payable wholly or in part by the Government the maximum amount of the same shall be $600.

(3) *Character of annuity options.*—The Austin and Gillett bills provide that the employee on retirement at the age of 70 may (1) withdraw the fund to his credit in one sum; (2) purchase an annuity terminable with his death; or (3) purchase a smaller annuity with provision for payment to his legal representative of any balance of the purchase price not paid in annuities. The President's Commission on Economy and Efficiency recommend that the amount to the credit of the employee retired at the age of 70 be paid "only in the form of a life annuity with return at death of any balance of deposit not received in annuities, (*a*) because cash settlements undoubtedly would, in many cases, result in the loss of the employee's savings through unwise investments, so that the employee would finally be worse off than if no plan of retirement had been provided; (*b*) because if a straight annuity were granted in which the employee forfeited his entire principal in case of death soon after entering on the annuity, great dissatisfaction would result among the families of employees who elected to take such settlement and possibly claims might be presented to the Government for the refund of the money paid for such annuities, on the ground that the employee was incompetent at the time of making the selection; and (*c*) because by requiring all employees 70 years of age to accept this settlement, the so-called 'selection' against the Government—through robust employees taking annuity settlements and employees in poor health taking cash—would be removed, and the rates charged the employees as a whole could safely be based on a mortality table that contemplated a somewhat higher rate of mortality, and consequently a lower price fixed for the annuities."

While a straight annuity with all rights in the fund terminated by death would be about 23 per cent greater than the annuity with the provision that any balance not received in annuities shall be payable to the personal representative of the annuitant, the reasons stated by the commission are believed to be sufficiently strong to call for the adoption of the one form of annuity recommended by the commission.

(4) *Resignation, death, discharge, and reinstatement.*—The Austin and Gillett bill provide that upon separation of the employee from the service prior to retirement he may withdraw his savings, and, if in the service for six years or more, with compound interest at the authorized rate, and that in case of death before retirement the savings and interest at authorized rate are payable to his legal heirs. The plan of the President's Commission on Economy and Efficiency provides that upon absolute separation from the service prior to the age of 60 years the employee may withdraw savings and accrued interest in one sum, but that after reaching that age, and prior to retirement, he may withdraw the same in one sum only if the amount of savings, with accrued interest, does not exceed $600. If the fund exceeds that amount it may be withdrawn in 10 annual installments, with interest on each installment. In case of death of the employee while in the service his savings, with accrued interest, are payable to his legal representatives; and in case of his death after separation from the service, where the fund is payable in installments, any balance due him is payable to his legal representatives. The reason for the restriction regarding the withdrawal of the entire fund after reaching the age of 60 years is that employees after reaching that age may not be competent to wisely invest their savings, and that in case of loss this would result in an effort on the employee's part to reenter the service. It is questionable whether the

recommendation of the commission does not err on the side of restricting the control of the employee over his own savings. It is believed that if the employee resigns and leaves the service before reaching the age of 65 the full amount of his savings, with interest, should be returned to him, but that if he leaves the service after reaching that age, and before reaching the age of 70 years, the fund should be paid to him in one sum, in installments, with interest, or in the form of an annuity for such an amount as the fund to his credit will purchase, according as he may elect.

In regard to reinstatement of the employee the Austin and Gillett bills and the plan of the President's commission provide that the employee shall be treated as a new entrant in the service unless he refunds the amount received on separation from the service, with interest, in which event it shall be placed to his credit and the former period of service counted.

(5) *Amount of deduction from pay.*—The President's Commission on Economy and Efficiency recommends deductions from the pay of each employee sufficient to purchase the annuity recommended on retirement—that is, one-half of pay but with a maximum of $600—but recommends that as to employees now in the service the rate of deductions be limited to a maximum of 8 per cent. The following table will give the approximate amount which must be deducted monthly from *a salary of $1,200* to provide, with interest at 4 per cent compounded annually, a fund adequate to purchase an annuity on retirement at the age of 70 years of $600, payable quarterly during the remainder of life, with provision for payment of balance of fund not drawn in annuities to the legal representatives of the annuitant. The last column shows the approximate amount of the annuity which could be paid on retirement at the age of 65 years:

Age at entrance.	Years of service.	Fund required for annuity of $600 ($600 X$9.10).	Monthly deductions from pay.	Annuity on retirement at age of 65 years (5 years less of service).
20	50	$5,460	$2.90	$396
25	45	5,460	3.70	394
30	40	5,460	4.70	390
35	35	5,460	6.00	380
40	30	5,460	7.90	370
45	25	5,460	10.70	360
50	20	5,460	15.00	340
55	15	5,460	22.20	300
60	10	5,460	37.10	220
65	5	5,460	82.20	....

This table clearly shows that if the employee is over 40 years of age the deductions from his salary at the maximum of 8 per cent will not be sufficient to purchase his annuity, and that the portion which must be contributed by the Government to supplement his contributions increases rapidly with the age of the employee at the time the deductions begin. If the employee is 50 years of age, his contribution would be $8 and the Government's $7; if 60 years of age, his contribution will be $8 and the Government's $29.10; if 65 years of age, his contribution will be $8 and the Government's $74.20. Of course 8 per cent on larger salaries will go further toward providing an annuity at the maximum amount of $600.

In regard to the amount of the monthly deduction, it is believed that in the absence of legislation for an increase of salaries to correspond with the increased cost of living, 8 per cent is too large a deduction from the salaries of the employees now in the service, except, perhaps, as to those in receipt of salaries in excess of $1,400. It is believed, therefore, that the maximum should be fixed at 6 per cent on salaries of $1,400 and less, and 8 per cent on salaries in excess of that amount.

(6) *Rate of interest.*—The rate of interest on the deductions under the plan of the President's Commission on Economy and Efficiency is 4 per cent, being the same rate

that is allowed by section 1306, Revised Statutes, on the deposits from the pay of enlisted men. This rate is probably as large a rate as can be realized in the safe investments of the fund in securities such as are provided in the plan.

The first Gillett bill provided for 3½ per cent, but later bills presented by Mr. Gillett changed the rate to 4 per cent; and the Austin bill provides, as stated above, for 5 per cent interest on the fund. There is much to be said in favor of the rate of 5 per cent. The Government will be the principal beneficiary of the plan in the improved efficiency of the service, and as the deductions will be made regardless of the wishes of the particular employee he should be secured a rate of interest approximately as large as he could obtain by safe investments for himself. However, as stated above, 4 per cent is as large a rate as can be realized on the fund; and a larger rate would depart from the plan that the employee shall provide for his own annuity on retirement, as the Government would, to the extent of the excess of interest, be required to contribute to the fund. It is believed, therefore, that 4 per cent should be accepted as the proper rate.

IV. Plan Recommended.

For the reasons given above, it is believed that any plan which should be recommended by the department should be limited to the "classified civil service in the executive departments and offices at Washington, *where the loss from superannuation is the greatest.*" It can later be extended to the service outside of the District of Columbia. The committee therefore recommends that the draft of bill submitted by the President's Commission on Economy and Efficiency (which is limited to the classified service in the District of Columbia), be changed in the particulars hereinbefore suggested, so that the salient features of the bill will be as follows:

(*a*) *The deduction of such amount monthly* from the salary of each employee as will, with 4 per cent interest compounded annually, purchase on his retirement at the age of 70 years an annuity payable quarterly throughout life of one-half of his pay, but not to exceed the maximum of $900: *Provided,* That in the case of employees now in the service the amount of the deductions shall not exceed 6 per cent on salaries of $1,400 or less, and 8 per cent on salaries in excess of $1,400. On promotion of an employee, the amount of his monthly deduction will be increased, subject to the prescribed limits as to employees now in the service, by such amount as will purchase an annuity equal to one-half of the added salary, or such less amount as will make the annuity $900.

(*b*) *Investments, etc.*—All deductions shall be credited to the individual account of the employee and be invested as provided in the bill.

(*c*) *Age for retirement.*—The retirement age shall be 70 years for all employees of the classified departmental service, with the privilege of retirement between the ages of 65 and 70 years on such annuity as the fund to the credit of the employee may procure.

(*d*) *Amount and character of annuity.*—Upon retirement at the authorized age the employee to receive such annuity as the funds to his credit will purchase, with the provision that any balance of the purchase price not received by the employee in annuities prior to his death shall be payable to his legal representatives. In the case of employees now in the service the annuity so procured shall be supplemented by the United States by such amount as will make the annuity equal to one-half of the salary of the employee but not to exceed a maximum of $600 per annum.

(*e*) *Disposition of fund on resignation, discharge, or death.*—In case the employee resigns, is discharged, or dies, before reaching the age of 65 years, the fund to his credit will be paid to him or his legal representatives, but if he leaves the service after reaching that age and before reaching the age of 70 years, the fund will be paid to him in not less than 10 annual installments with interest, or in the form of an annuity for such amount as the fund to his credit will purchase, as he may elect; and any balance not paid at the time of his death will be paid to his legal representatives.

(*f*) *Reinstatement.*—In case of reinstatement the employee will be treated as a new entrant in the service, unless he refunds the amount received on separation from the service, with interest thereon, in which event it shall be placed to his credit and the former period of service counted.

V. COST TO THE GOVERNMENT.

The cost to the Government of providing for the retirement of all employees now in the service at the age of 70 years, under the plan proposed by the President's Commission on Economy and Efficiency, is given on pages 48–50 of the printed report of the commission to the President. Of the 22,754 employees in the classified service in the District of Columbia on November 1, 1911, 2,224, or a little over 9 per cent, were over 65 years of age, and 951 of this number were over 70 years of age. The average salary of the employees over 70 years of age was slightly over $1,000. In the War Department there were 153 employees over the age of 70 receiving salaries averaging about $1,450. The annual loss to the Government from superannuation is discussed in the report of the commission (pp. 37–45) and the data obtained by the commission showed that at the age of 70 the loss from superannuation was 14.26 per cent. This percentage is regarded by the commission as too low, partly due to the difficulty in making the estimates and partly to reluctance to turning in schedules rating the employees as inefficient. The commission says (p. 42):

"An inquiry covering the employees in one of the large offices of the Government in which the work is of such a character as to be capable of actual measurement both as to quality and quantity, and where it is known that the officer at the head of the bureau undertook to answer the inquiry by basing the returns on an accurate record of work performed, shows that employees over 70 years of age earned but 56.31 per cent of the salary paid them. In this office there are 33 employees 70 years of age and over, the total of salaries paid them amounts to $40,660, and of this amount they are reported as not earning $17,740."

It is probable that the record of loss to the Government from superannuation made in the office here referred to approximates more nearly the loss from superannuation than the average of the data obtained by the commission. On the basis of these data, the employees over 70 years of age could be retired on an annuity of $600 per annum at very little, if any, cost to the Government.

One plan of providing for the retirement of superannuated employees without additional appropriations was suggested by President Taft in his annual message to Congress of December 6, 1910, in which he recommended that the annuities be paid out of the salaries appropriated for the positions vacated by retirement; and that the difference between the annuities thus granted and the salaries be used for the employment of efficient clerks of the lower grades. This would be a practical solution of the difficulty without calling for additional appropriations, but it would not permit of deserved promotion of the employees who will be doing the class of work performed by the employees who vacate the positions, and it would unquestionably result in a gradual deterioration of the service. It is believed, therefore, that the better plan would be to fill some of the positions in the usual way by promotions, discontinuing such number of places of the several grades as will approximately equal the annuities paid to the retired employees. It would seem that the increased efficiency of the service, brought about by the retirement of the superannuated employees, should permit of such decrease in the number of positions as is here suggested. If this be done there would be practically no initial cost to the Government of putting the plan into operation, but provision would have to be made for future retirements.

VI. CONCLUDING REMARKS.

While it is believed that the plan of the President's Commission on Economy and Efficiency, modified as hereinbefore suggested, will best meet the needs of the departmental service, the plan proposed in the Gillett and Austin bills, now before Congress, would substantially meet the requirements. The provisions in the Austin bill for

15 per cent increase in salary and 5 per cent interest on deposits have made that bill an attractive one from the standpoint of the employees. It is believed, however, that the increase of compensation should be made a part of a general plan for reclassification of positions and salaries, and this subject will be treated in a separate report.

If the views herein recommended are approved, the draft of bill submitted by the President's Commission on Economy and Efficiency should be amended as hereinbefore recommended.

J. B. Aleshire,
Chief Quartermaster Corps,
E. H. Crowder,
Judge Advocate General,
John C. Scofield,
Assistant and Chief Clerk,
Committee on Economy and Efficiency.

June 16, 1913.

Illustration of plan recommended.

	Salary.	Monthly deductions.	Annuity on retirement.	
			Age 70.	Age 65.
Appointed at age of 20	$900	$2.20	$450	$297
Promoted at age of 25	1,000	$2.20+$0.30=$2.50	500	330
Promoted at age of 30	1,200	$2.20+$0.30+$0.80=$3.30	600	396
Promoted at age of 35	1,400	$2.20+$0.30+$0.80+$1.00=$4.30	700	423
Promoted at age of 40	1,600	$2.20+$0.30+$0.80+$1.00+$1.30=$5.60	800	454
Promoted at age of 45	1,800	$2.20+$0.30+$0.80+$1.00+$1.30+$1.80=$7.40	900	484
Promoted at age of 50	2,000	Same	Same.	Same.

RECLASSIFICATION OF CIVIL SERVICE EMPLOYEES.

1. Present system and need of reclassification, page 131.
2. Present classification established in 1853, page 131.
3. Inadequacy of salaries, page 131.
    (a) Increased cost of living, page 131.
    (b) General increase in wages, etc., page 131.
    (c) Increased pay in Army, Navy, etc., page 131.
4. Comparison with salaries in private life, etc., page 131.
5. Classification according to character of work, page 132.
6. Schedule of grades and salaries, page 132.
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7 Gillett reclassification bills, page 133.
    (a) Supervisory grades, page 133.
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        (1) "Senior clerks," salaries, page 133.
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    (c) Sub-clerical grades, page 133.
        (1) Messenger, watchmen, etc., salaries, page 133.
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    (d) Professional, etc., positions, page 133.
8. Automatic promotions within grades, page 133.
9. Explanation of classification, page 133.
10. Report of House Committee, April 12, 1910, page 134.
11. Necessity of reclassification. Report of the Civil Service Commission, page 134.
12. Concluding remarks, page 134.

1. **Present system and need of reclassification.**—Under this heading the "Keep Commission," a committee on department methods appointed by the President, June 2, 1905, in its report to the President dated January 4, 1907, on the subject of classification of positions, etc., in the executive departments, called attention to the fact that the "salaries now paid in the departmental service in Washington are based upon a classification of the clerks made in acts of Congress in 1853 and 1854," grading the entire clerical force (except in the Departments of State and Justice) "into four classes, designated first, second, third, and fourth class clerks, and fixing the compensation of these classes at $1,200, $1,400, $1,600, and $1,800, respectively"; that the average salary of the "700 clerks provided for in these acts was $1,446"; and that

"Since 1853, as the country has grown and the needs of the Government have called for a larger force for the transaction of its business, from time to time additional positions have been created, divisions have been added, and new bureaus have been established, until at the present time the departmental service in Washington employs in clerical and professional, scientific, and technical positions approximately 13,000 persons, and the service administered by these employees numbers in Washington and elsewhere over 150,000 persons. There are now individual bureaus that have more employees than the entire departmental service in 1853. There are to-day division chiefs who are required to pass upon questions of greater complexity and involving greater responsibility than were the bureau chiefs of 50 years ago."

2. The four classes of salaries established in 1853 have been accepted since 1853 as furnishing the proper basis of compensation, and other classes have been added from time to time either by appropriation acts or by administrative officers in the handling of lump-sum appropriations, the compensation having been fixed with more or less reference to the basic salaries prescribed in 1853. The growth of the country and the broadening of jurisdiction of the General Government have not only enormously increased the number of employees, but have added to the character of work required of these employees in the civil service, until, as stated in the report of the Keep Commission, there are "division chiefs who are required to pass upon questions of greater complexity and involving greater responsibility than were the bureau chiefs of 50 years ago."

(3) The inadequacy of the salaries fixed in 1853 to meet the present conditions will be apparent from the following changes in conditions which have occurred since their establishment in 1853:

(*a*) The city of Washington has grown from a town of about 40,000 to a city of about 350,000—this growth having been accompanied by higher standards of living, increased rents, and increased prices for the necessities of life.

(*b*) Since 1853 there has been a large increase in the wages of labor and in the earnings in professional business pursuits—the increase in the daily wages of employees in 20 industries between 1853 and 1890 being 73.1 per cent (Report of Senate Finance Committee on wholesale prices, wages, and transportation, published in 1893).

(*c*) Because of the increased cost of living there has been in recent years an increase of about 20 per cent in the pay of officers and enlisted men of the Army and Navy, and a larger increase in the salaries of Members of Congress, heads of departments, and various judicial officials of the United States, *but there has been no corresponding general increase in the salaries of the civil-service employees of the departments.*

(4) After extended investigation relative to the salaries paid by the Government as compared with those paid for similar services by corporations and other business establishments, the Keep Commission made this finding:

"In general it is found that *directive* and *supervisory* agents and those using technical skill or expert knowledge are much better paid in private and corporate employ than in the Government; that the *better grades* of efficient and well qualified employees are somewhat better paid than those in similar positions in the departments; and that the lower grades of clerks, stenographers, and typewriters are better paid in the public service than in private employ."

The investigation of the commission further showed that although the lower grades of clerical employees of the Government are better paid than for similar work in private life, it was difficult to retain in the service competent persons meeting the tests prescribed by the Civil Service Commission. During the fiscal year 1906, 1,462 persons were offered positions at less than $900 in the departments at Washington, and of these 442, or 30.23 per cent, declined.

"Positions at $900 or more were offered to 762 persons, and 202, or 26.51 per cent, declined. Under the War Department the declinations of positions in Washington rose to 32 per cent, while the declinations of field positions reached 53 per cent. Of the 860 male eligibles on the clerical register of the Civil Service Commission, 445, or 51.73 per cent, have stated that they would not accept positions at a salary lower than $840."

The commission further says:

"In 1906 there were 569 resignations of positions below $900 in Washington, compared with 1,020 acceptances of similar places, and 664 resignations at $900 or more, compared with 560 acceptances. The total resignations were 1,233 and the total acceptances 1,580. In less than six years 676 persons have retired from the force of the War Department employed in Washington. Of this number 228, or 33.75 per cent, usually the more efficient young men, with salaries averaging $1,051 a year, left the service voluntarily to better their condition."

(5) But the investigations of the Keep Commission showed that there was not only a need for an increase of salaries, but for a reclassification of salaries in accordance with the character of work performed. In the report of the commission it is said:

"It is a well-known fact that through all the departments people are sitting side by side doing the same class of work and receiving very different compensation. Some clerks doing the simplest kind of work are, by reason of length of service, receiving high salaries, while young men only recently certified by the Civil Service Commission, whose general intelligence and ability soon cause them to be assigned to the most difficult work in the office, have to wait many years before they receive the recognition in salary that the character of their work justified. A large proportion of the injustice and favoritism in the Government service springs from this cause; and while no system can be made to fit every individual case, the adoption of the general principle involved in the schedule at the beginning of this report will very largely reduce injustice of this kind now existing."

It is probable that these conditions, together with the limited opportunities in the civil service, are largely responsible for so many resignations of the ambitious and more competent men who enter the service.

(6) The commission found that competent employees could not be obtained for clerical work at a lower compensation than $900, and recommended that this amount be fixed as the lowest compensation for such service. It submitted a schedule of grades and salaries arranged with the following purposes in view:

(*a*) The lower salaries to be sufficient to attract competent persons to the service.

(*b*) Salaries to be sufficiently graded to insure frequent promotion as a stimulus to the best efforts.

(*c*) The higher salaries to be sufficiently high to develop and retain the best executive and expert service.

(*d*) The graduation and equalization of salaries in all the departments to be in accordance with the character and responsibility of the work performed.

Estimates for salaries in accordance with this schedule were submitted to Congress, but no action was taken thereon other than the hearings before the Subcommittee of the House Committee on Appropriations, March 8 and 14, 1908, on the message of the President transmitting this plan for the reclassification of "grades and salaries in the executive departments."

7. The Gillett reclassification bill (H. R. 22014, 61st Cong., 2d sess.), reintroduced by Mr. Gillett as H. R. 1298 (62d Cong., 1st sess.), and again reintroduced by Mr. Gillett on April 21, 1913, as H. R. 3332 (63d Cong., 1st sess.), gives the main features of the classification proposed by the Keep Commission. The bill provides for the following schedule of grades and salaries:

(a) *Supervisory grades.*—Chief clerks, chiefs of divisions, and other employees who perform supervisory, executive, or administrative duties, *to be specifically estimated for:* Salaries, $4,200 to $2,100.

(b) *Clerical grades.*—(1) "Senior clerks" (work largely supervisory and requiring the highest order of clerical ability, involving much original thought, consideration, and investigation): Salaries, $2,100, $1,980, and $1,860.

(2) "Clerks" (work more or less routine, involving responsibility and special ability and original thought, consideration, and investigation): Salaries, $1,740, $1,620, and $1,500.

(3) "Junior clerks" (work of a routine character, requiring but little original thought or consideration but requiring judgment, responsibility, and special skill): Salaries, $1,380, $1,320, $1,260, and $1,200.

(4) "Under clerks" (work of a simple routine character, requiring care, accuracy, and skill): Salaries, $1,080, $1,020, $960, and $960.

(c) *Subclerical grades.*—(1) Messenger, watchmen, skilled laborers: Salaries, $840, $780, $720, and $660.

(2) Laborers generally: Salaries, $660 and $600.

(3) Messenger boys: Salaries, $480, $420, $360, and $300.

(4) Charwomen and janitors (employed part of the time only): Salaries, $360, $300, and $240.

(d) *Professional, scientific, technical trades, etc., with titles to correspond with qualification; salaries to be fixed in accordance with schedule most appropriate to the value of the services.*

8. The bill provides for the appropriations to be for a specified number of clerks in each grade; the distribution within each grade at first to be fixed by the head of the respective department, but within the limits of the amount appropriated; and that "on the 1st of January and the 1st of July of every year those clerks *who have shown a satisfactory degree of efficiency* in their work shall be advanced to the next higher rate of salary within their respective grades above those which they have been receiving *for one year or more;* and the additional amount necessary to cover the cost of said semiannual advancements of clerks shall be appropriated in general terms: *Provided,* That nothing herein shall prohibit the promotion or reduction of clerks and other employees from one grade to another at any time when vacancies occur in the numbers provided for any grade."

9. It will be observed that aside from the supervisory grades and the professional, scientific, and technical positions, the plan provides for four clerical grades with three rates of salary for "senior clerks," three rates for "clerks," four for "junior clerks," and four for "under clerks," making 14 different rates of salaries within the "clerical grades;" that in the grades of "junior clerks" and under clerks the difference between any two salaries is $5 a month and $10 a month between the grades; and that in the grades of "senior clerks" and "clerks" the difference is $10 a month both within and between these grades. The plan provides for promotion within the grade at stated periods following efficient service for a year or more, the amount necessary to cover such promotions to be appropriated for in general terms, and that promotions from grade to grade shall be made only as vacancies occur in the number provided for in

any grade. The classification provided for in the bill appears to be adapted to carry out the purposes specified in the report of the "Keep Commission."

10. Mr. Gillett, in submitting the report of the House Committee on Reform in the Civil Service, April 12, 1910 (Rept. No. 988, 61st Cong., 2d sess.), on H. R. 22014 (61st Cong., 2d sess.), called attention to the need for reclassification of the salaries to make them correspond with the work performed, pointing out that the existing classification is based on the acts of 1853 and 1854, when only about 700 clerks were affected; that the bill embodies the recommendation of the "Keep Commission;" that with a larger number of salary grades and smaller intervals between them, promotions will be more frequent, which will naturally prevent stagnation; and that the estimates for the fiscal year 1910, for salaries for 14,484 persons (S. Doc. 638, 60th Cong., 2d sess.), show that the plan will involve an average increase of only about 8.5 per cent in the appropriation.

11. The need for reclassification of salaries in accordance with the character of work performed, and to make some provision for increase of pay to correspond with the increased cost of living, has been generally felt in the executive departments; and the Civil Service Commission in its annual report for 1912 used the following language (p. 32):

"A reclassification of salaries on the basis of work performed is absolutely necessary and essential to any plan of retirement or further satisfactory and efficient reforms in the service. The salaries need to be related to duties not merely in the same department, but throughout the departments, thus treating the Government service as a whole. Until reclassification is effected it will not be possible properly to adjust salaries on any uniform basis, to legislate suitably upon the conditions of employment, or to provide equitably for superannuation."

12. There can be no question but that there is grave need for legislation to provide for a reclassification of salaries and places, and the need for such legislation should be brought to the attention of Congress. The Gillett bill now before the House (H. R. 3332, 63d Cong., 1st sess.), provides, as stated above, for the reclassification of grades and salaries in accordance with the plan of the "Keep Commission," involving a moderate increase in salaries (averaging about 8.5 per cent), with a larger number of grades and salaries so as to give more frequent promotion and thus prevent stagnation in the service. The provisions of this bill appear to be well adapted to improve the efficiency of the service. On the basis of the same number of clerks, etc., the plan would call for an increase of expenditure of about 8.5 per cent; but it would seem that the increased efficiency of the service which would result from the reclassification should admit of some reduction in the number of employees, with a resulting saving to the Government. The amount of such saving can not be definitely determined as it would depend largely upon the improvement of the business methods of the departments by the elimination of unnecessary work in each bureau, the elimination as far as practicable of duplication of work by different bureaus, and better administration to get the maximum results from the labor of the employees. Any further saving would have to result from the increase of the hours of labor, and it is very questionable whether this would be desirable. It is believed, however, that if Congress would give the department a lump-sum appropriation not exceeding the aggregate now expended, accompanied with authority to reclassify the service in accordance with the plan provided for in the pending Gillett bill, the reclassification would be effected without any additional cost to the Government. The committee finds, however, that it is unable to report any plan of reclassification which would result in any certain and substantial savings to offset the expenditure required in putting into effect the plan for retirement. As explained in the report on retirement, the initial expense can be largely if not entirely met by a reduction of the number of places; but for some years thereafter additional appropriations would have to be made to provide for the retirement of employees on reaching the age of 70 years before their savings would bear

the expense of their own retirement. It is believed, however, that if the department be given a lump appropriation with authority to reclassify positions and salaries on the lines of the pending Gillett bill, making the necessary reduction in the number of places, both the plan for retirement and the plan for reclassification could be put into operation without any present additional expense to the Government.

J. B. Aleshire, *Chief Quartermaster Corps,*
E. H. Crowder, *Judge Advocate General,*
John C. Scofield, *Assistant and Chief Clerk,*
Committee on Economy and Efficiency.

June 16, 1913.

REPORT OF THE CHIEF OF STAFF.

REPORT OF THE CHIEF OF STAFF.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, October 31, 1913.

SIR: I have the honor to submit the following annual report, which in all that relates to expenditures covers only the fiscal year terminating June 30, 1913:

GENERAL STAFF.

The duty of the General Staff has been particularly arduous during the past year. There has been a great deal of work incident to the study of existing military problems; organization, equipment, and instruction of the militia; the coordination of the work of the various staff corps with the general work of the Army; the consideration of new drill regulations; the unit system of equipment; the question of the enlistment period of reserves; the question of reserve matériel; reports on foreign armies; the conduct of education in the universities, colleges, and schools maintaining a course of military instruction; the question of establishing a proper organization of the line of communications; and many other important matters looking to the increased efficiency of the service.

It was necessary, incident to the detached-service law, to relieve a number of officers of the General Staff, whose loss has been especially felt, although the officers who have taken their places have gradually taken up the work. It is most desirable that the original number of officers allotted to the General Staff should be restored, in order that we may have a sufficient number to perform properly the General Staff work and that there may be at the War College as President a general officer who is a member of the General Staff. A number of officers pursuing the course at the War College are of such rank, experience, and length of service as to render it desirable that the president of the institution should be a general officer.

The work of the Army War College, supplementing and rounding out as it does the work of the service schools, is having a most important influence in gradually establishing a sound military doctrine throughout the service and in building up a military policy. The course for the student officers has been a comprehensive one and highly beneficial to all who are able to take it. The general effect has bee to turn out an officer who looks to a well-balanced and organized arm rather than the development of any one arm.

STRENGTH OF THE ARMY.

The authorized strength of the Army, not including Hospital and Philippine Scouts, on June 30, 1913, was as follows:

Officers..........
Enlisted men..........

Including Hospital Corps and Philippine Scouts:

Officers	4,943
Enlisted men	94,042

The actual strength of the Army, not including Hospital Corps and Philippine Scouts, on June 30, 1913, was as follows:

Officers	4,665
Enlisted men	75,321

Including Hospital Corps and Philippine Scouts:

Officers	4,845
Enlisted men	84,143

The shortage in the Army, not including Philippine Scouts or Hospital Corps, on June 30, 1913, was as follows:

Officers	98
Enlisted men	9,489

Including Philippine Scouts:

Officers	98
Enlisted men	9,818

The authorized enlisted strength of the Quartermaster Corps, on June 30, 1913, was 6,000.

The actual strength of the Quartermaster Corps on June 30, 1913 (enlisted), was 3,047.

(For changes showing increases and decreases in the Army since issuance of General Orders, No. 138, Oct. 9, 1911, See Appendix 1.)

COST OF THE ARMY.

Comparative statement of War Department estimates for the fiscal year ending June 30, 1915, with estimates and appropriations for the fiscal year ending June 30, 1914.

	Estimates for 1915.	Total estimates for 1914.	Appropriations for 1914.	Increase (+) and decrease (−) of 1915 estimates against 1914 total estimates.	Increase (+) and decrease (−) of 1915 estimates against 1914 appropriations.	Increase (+) and decrease (−) of 1914 estimates against 1914 appropriations.
(a) War Department proper (exclusive of rivers and harbors)	$133,707,154.66	$126,167,372.20	$116,760,398.44	+$7,539,782.46	+$16,946,756.22	+$9,406,973.76
(b) Rivers and harbors	44,158,495.00	58,861,592.00	53,631,239.00	−14,703,097.00	− 9,472,744.00	+ 5,230,353.00
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76
(a) Includes permanent annual and indefinite appropriations of	6,643,000.00	6,051,000.00	6,051,000.00	+ 592,000.00	+ 592,000.00	
(b) Includes permanent annual and indefinite appropriations of	2,674,600.00	2,094,600.00	2,512,350.00	+ 580,000.00	+ 162,250.00	− 417,750.00
Total	9,317,600.00	8,145,600.00	8,563,350.00	+ 1,172,000.00	+ 754,250.00	− 417,750.00
GENERAL OBJECTS.						
Civil establishment (salaries, stationery, etc., War Department; legislative bill)	1,944,718.00	1,993,998.00	1,949,648.00	− 49,280.00	− 4,930.00	+ 44,350.00
Military Establishment:						
(c) Support of the Army (Army bill)	99,893,508.65	96,824,789.44	93,531,145.51	+ 3,068,719.21	+ 6,362,363.14	+ 3,293,643.93
Military Academy (Military Academy bill)	1,052,875.61	1,666,735.69	1,094,734.87	− 613,860.08	− 41,859.26	+ 572,000.82
(d) Militia (Army bill and $4,000,000 permanent annual appropriations)	10,854,250.00	6,536,003.09	6,035,000.00	+ 4,318,246.91	+ 4,819,250.00	+ 501,003.09
Public works (military):						
(e) Fortifications (fortification bill)	9,199,399.49	7,090,834.00	5,299,250.00	+ 2,108,565.49	+ 3,900,149.49	+ 1,791,584.00
Arsenals (sundry civil bill)	605,222.00	762,572.00	643,000.00	− 157,350.00	− 37,778.00	+ 119,572.00
Military posts and miscellaneous (sundry civil bill)	2,281,412.10	3,181,546.98	820,119.66	− 900,134.88	+ 1,461,292.44	+ 2,361,427.32
Public works (civil):						
Military parks, etc. (sundry civil bill)	558,060.00	520,032.00	457,060.00	+ 38,028.00	+ 101,000.00	+ 62,972.00
Buildings and grounds in and around Washington (sundry civil bill)	388,990.00	413,490.00	370,490.00	− 24,500.00	+ 18,500.00	+ 43,000.00
(f) Rivers and harbors (river and harbor and sundry civil bills)	44,158,495.00	58,861,592.00	53,631,239.00	−14,703,097.00	− 9,472,744.00	+ 5,230,353.00
Miscellaneous:						
National cemeteries (sundry civil bill)	335,420.00	635,620.00	292,620.00	− 300,200.00	+ 42,800.00	+ 343,000.00
(g) Miscellaneous objects (sundry civil bill)	1,466,798.81	1,314,260.00	1,086,065.40	+ 152,538.81	+ 380,733.41	+ 228,194.60
National Home for Disabled Volunteer Soldiers (sundry civil bill)	5,126,500.00	5,227,491.00	5,181,265.00	− 100,991.00	− 54,765.00	+ 46,226.00
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76

Comparative statement of War Department estimates for the fiscal year ending June 30, 1915, with estimates and appropriations for the fiscal year ending June 30, 1914—Continued.

	Estimates for 1915.	Total estimates for 1914.	Appropriations for 1914.	Increase (+) and decrease (−) of 1915 estimates against 1914 total estimates.	Increase (+) and decrease (−) of 1915 estimates against 1914 appropriations.	Increase (+) and decrease (−) of 1914 estimates against 1914 appropriations.
(*c*) Includes permanent annual appropriation for refund of soldiers' deposits	$1,800,000.00	$1,300,000.00	$1,300,000.00	+ $500,000.00	+ $500,000.00	
(*d*) Includes permanent annual appropriations for militia	4,000,000.00	4,000,000.00	4,000,000.00			
(*e*) Includes permanent annual appropriations for Ordnance Department	75,000.00	81,000.00	81,000.00	− 6,000.00	− 6,000.00	
(*f*) Includes permanent annual, specific, and indefinite appropriations for rivers and harbors	2,674,600.00	2,094,600.00	2,512,350.00	+ 580,000.00	+ 162,250.00	− $417,750.00
(*g*) Includes miscellaneous permanent annual appropriations	768,000.00	670,000.00	670,000.00	+ 98,000.00	+ 98,000.00	
Total permanent annual, specific, and indefinite appropriations	9,317,600.00	8,145,600.00	8,563,350.00	+ 1,172,000.00	+ 754,250.00	− 417,750.00
Plus estimates for 1915 submitted for action of Congress	168,548,049.66	176,883,364.20	161,828,287.44	− 8,335,314.54	+ 6,719,762.22	+15,055,076.76
Total	177,865,649.66	185,028,964.20	170,391,637.44	− 7,163,314.54	+ 7,474,012.22	+14,637,326.76

Per capita cost of the Army (including officers and enlisted men, cadets, United States Military Academy, Hospital Corps, Quartermaster Corps, and Philippine Scouts), based on the appropriations made by Congress for the support of the Army and Military Academy, for the fiscal years 1911 to 1914, inclusive.

General objects.	Appropriated, 1911.	Appropriated, 1912.	Appropriated, 1913.	Appropriated, 1914.
All contingent funds	$62,500.00	$62,500.00	$47,500.00	$47,500.00
Army War College	10,000.00	10,000.00	9,000.00	9,000.00
United States service schools	25,000.00	25,000.00	30,000.00	30,880.00
Coast Artillery School, Fort Monroe, Va.	24,000.00	24,000.00	24,000.00	24,000.00
Signal Service of the Army	250,137.69	375,140.00	375,000.00	375,000.00
Washington-Alaska military cable and telegraph system	75,000.00	125,000.00	50,000.00	50,000.00
Annunciator buzzer systems at target ranges			10,000.00	4,000.00
Pay, etc., of the Army	44,751,908.28	45,848,563.75	46,456,432.38	46,804,950.08
Mileage to officers and contract surgeons	626,858.48	600,000.00	500,000.00	500,000.00
Subsistence of the Army	9,100,178.98	9,663,222.01	9,497,080.67	9,098,617.00
Regular supplies, Quartermaster Corps	8,200,437.96	8,337,380.44	7,807,773.00	7,009,648.00
Equipment of officers' schools, military posts	10,000.00	9,300.00	6,000.00	5,700.00
Incidental expenses, Quartermaster Corps	2,235,298.85	2,100,091.07	1,888,000.00	1,900,000.00
Horses for Cavalry, Artillery, Engineers, etc	434,597.90	517,165.80	300,000.00	825,240.00
Barracks and quarters	1,005,780.22	1,856,984.78	1,700,000.00	1,928,000.00
Officers' quarters, Remount Depot, Front Royal, Va				150,000.00
Barracks and quarters, Philippine Islands	375,000.00	600,000.00	500,000.00	500,000.00
Military post exchanges	70,000.00	40,000.00	40,000.00	40,000.00
Transportation of the Army and its supplies	11,913,565.54	11,133,430.11	10,800,000.00	10,560,556.00
Roads, walks, wharves, and drainage	900,508.00	449,315.79	925,300.00	642,597.00
Water and sewers at military posts	2,584,723.00	2,200,908.27	1,702,598.00	1,584,412.00
Clothing and camp and garrison equipage	6,000,001.58	4,901,290.27	5,000,000.00	6,000,000.00
Construction and repair of hospitals	588,357.06	400,000.00	400,000.00	400,000.00
Quarters for hospital stewards	15,000.00	10,000.00	10,000.00	9,700.00
Shooting galleries and ranges	184,125.00	125,948.00	93,830.00	84,807.00
Maintenance, Army War College	12,700.00	12,700.00	10,700.00	10,700.00
Rent of buildings, Quartermaster Corps			49,587.00	49,587.00
Claims for damages to and loss of private property			82,610.00	1,682.45
Equipping Army transports with lifeboats and rafts			300,000.00	
Reimbursement to the District of Columbia for site acquired for a reformatory			33,000.00	
Medical and hospital department	700,000.00	700,012.00	700,000.00	750,000.00
Army Medical Museum and Library	15,000.00	15,000.00	15,000.00	15,000.00
Engineer depots	30,000.00	30,000.00	30,000.00	30,000.00
Engineer School, Washington, D. C	25,000.00	20,242.72	25,000.00	25,000.00
Engineer equipment of troops	90,000.00	90,000.00	90,000.00	50,000.00
Pontoon shed, Washington Barracks, D. C				15,000.00
Civilian assistants to Engineer officers	40,000.00	42,000.00	40,000.00	40,000.00
Ordnance service	325,000.00	337,000.00	300,118.30	300,000.00
Ordnance stores: Ammunition	450,000.00	500,000.00	250,000.00	200,000.00
Blank ammunition for maneuver camps	75,000.00			
Ordnance stores and supplies	800,000.00	800,000.00	700,000.00	750,000.00

Per capita cost of the Army (including officers and enlisted men, cadets, United States Military Academy, Hospital Corps, Quartermaster Corps, and Philippine Scouts), based on the appropriations made by Congress for the support of the Army and Military Academy, for the fiscal years 1911 to 1914, inclusive—Continued.

General objects.	Appropriated, 1911.	Appropriated, 1912.	Appropriated, 1913.	Appropriated, 1914.
Small-arms target practice	1,000,000.00	1,000,000.00	800,000.00	600,000.00
Manufacture of arms	1,000,055.50	750,008.56	700,000.00	700,000.00
Automatic rifles (machine)	150,000.00	200,000.00	150,000.00	....
National trophy and medals for rifle contests	10,000.00	10,000.00	10,000.00	10,000.00
Pay of Military Academy	611,520.20	669,299.07	728,177.80	749,614.87
Current and ordinary expenses, Military Academy	142,598.00	138,333.00	139,807.00	138,678.00
Miscellaneous items and incidental expenses, Military Academy	51,880.00	56,812.50	55,080.00	56,230.00
Buildings and grounds, Military Academy	56,252.00	38,979.50	141,603.46	150,212.00
	95,619,871.14	94,934,679.29	93,574,756.51	93,143,380.38
Less appropriations for the following objects:				
Pay of retired officers	3,222,025.00	3,362,850.00	3,265,000.00	3,337,000.00
Pay of retired pay clerks	....	....	....	21,750.00
Pay of retired enlisted men	2,100,000.00	2,147,670.00	2,150,000.00	2,400,935.20
Interest on soldiers' deposits	100,000.00	100,000.00	130,000.00	90,000.00
Subsistence, etc., to National Guard officers' attending service and garrison schools	20,000.00	20,000.00	21,500.00	20,000.00
Annuity to Jennie Carroll and Mabel H. Lazear	3,000.00	3,000.00	3,000.00	3,000.00
Annuity to John R. Kissinger	453.33	1,200.00	1,200.00	1,200.00
	5,445,478.33	5,634,720.00	5,570,700.00	5,873,885.20
	90,174,392.81	89,299,959.29	88,004,056.51	87,269,495.18

The average strength of the Army (officers and enlisted men) for the fiscal year 1911, including the Hospital Corps (3,453), cadets United States Military Academy (415), and the Philippine Scouts, officers and enlisted men (5,379), amounted to 81,777 men. The sum of $90,174,392.81 was appropriated for the service of this fiscal year, making the cost of maintenance $1,102.68 per man for the year.

The average strength of the Army (officers and enlisted men) for the fiscal year 1912, including the Hospital Corps (3,474), cadets United States Military Academy (535), and the Philippine Scouts, officers and enlisted men (5,632), amounted to 87,629 men. The appropriations for this year aggregated $89,299,959.29, making the cost of maintenance $1,019.06 per man for the year.

The average strength of the Army (officers and enlisted men), for the fiscal year 1913, including the Hospital Corps (3,419), cadets United States Military Academy (556), Philippine Scouts, officers and enlisted men (5,660), and enlisted men of the Quartermaster Corps created by the Army act approved August 24, 1912 (2,219), amounted to 95,359 men. The appropriations for this year aggregated $88,004,056.51, making the cost of maintenance $922.87 per man for the year.

Based upon the authorized strength of the Army (officers and enlisted men) for the fiscal year 1914, including 3,500 enlisted men of the Hospital Corps, 613 cadets United States Military Academy (number estimated), 5,912 officers and men of the Philippine Scouts, and 4,000 enlisted men of the Quartermaster Corps, amounting to 103,651 men, and appropriations of $87,269,495.18, the estimated cost of maintenance would be $841.95 per man for the year.

The foregoing per capita cost is based upon total appropriations made for the support of the Army and the Military Academy, and would be somewhat reduced if deduction were made for that portion of the appropriations used to create reserve supplies of ordnance, quartermaster, and medical stores and supplies.

The following table shows the approximate amounts expended and to be expended for reserve supplies:

Class.	Expended fiscal year 1911.	Expended fiscal year 1912.	Expended fiscal year 1913.	Estimated expenditure fiscal year 1914.
Ordnance	$780,864.23	$796,763.46	$627,410.78	$450,000.00
Quartermaster	844,256.04	332,041.76	....	244,952.79
Medical	284,747.84	143,049.54	137,784.75	100,000.00
Total	1,909,868.11	1,271,854.76	765,195.53	794,952.79

Deducting the total allowances for reserve supplies, amounting to $4,741,871.19, from the total appropriations ($354,747,903.79) for the fiscal years 1911 to 1914, inclusive, the average annual cost per capita would be $950.03 per officer and enlisted man, based upon the average annual strength of the Army for the years named, including the Hospital Corps, cadets, United States Military Academy, Philippine Scouts, and enlisted men of the Quartermaster Corps.

The foregoing figures represent the approximate cost of enlistment, equipment, support, and maintenance of the personnel of the Army of every character, including muster, pay, subsistence, transportation by land and water, the purchase and repair of ships, boats, and other vessels required for the transportation of troops and supplies and for official, military, and garrison purposes; expenses of sailing public transports and other vessels; clothing and quartermaster supplies; ordnance stores and ordnance equipment; manufacture of small arms and ammunition; rifle practice; medical and hospital supplies and treatment; signal service and aeronautics; every contingent expenditure connected with the Military Establishment; the maintenance of the War College, Army Medical School and Library, service and garrison schools; pay of cadets and current and miscellaneous expenses of the Military Academy, and the expenses of upkeep of the grounds and buildings of the Military Establishment and Military Academy.

Permanent land improvements incident to the establishment of military posts, forts, arsenals, sites for fortifications, emplacements for heavy ordnance, armament of fortifications, gun and mortar batteries, fortifications in insular possessions, barracks and quarters for seacoast defenses (in the United States and the insular possessions), and all other public improvements of a permanent nature under the War Department, appropriations for which are classed under the general head of "Public works," are, as a matter of course, not included in the foregoing statement, as they may be considered as not directly pertaining to the cost of the personnel of the Army.

It will be noted that the average per capita cost of the Army has been gradually decreasing since the fiscal year 1910, in which year the cost averaged $1,142 per officer and man. Last year it was $922.87; this year it is estimated at $841.95. Had the 1910 average per capita cost been maintained throughout the fiscal years following it would have necessitated appropriating the following amounts, based upon the average strength of the Army for the fiscal years 1911, 1912, and 1913, and the authorized strength for the fiscal year 1914:

Fiscal year 1911, $93,389,334.00 instead of $90,174,392.81, as appropriated.
Fiscal year 1912, 100,072,318.00 instead of 89,299,959.29, as appropriated.
Fiscal year 1913, 108,899,978.00 instead of 88,004,056.51, as appropriated.
Fiscal year 1914, 118,369,442.00 instead of 87,269,495.18, as appropriated.

Comparative statement of the appropriations, regular and deficiency, made for the support of the Army and the Military Academy for the fiscal years 1905 to 1914, and the average strength of the Army for the same years, including cadets, Hospital Corps, and Philippine Scouts—Appropriations carried in the Army acts for Organized Militia and construction of roads, bridges, and trails in Alaska, not included:

Fiscal Year.	Support of the Army	Military Academy.	Total.	Average strength.
1905	$76,335,230.30	$992,424.64	$77,327,654.94	68,409
1906	70,585,811.75	673,713.38	71,259,525.13	69,351
1907	75,143,826.22	1,666,441.00	76,810,267.22	66,249
1908	81,860,521.46	1,992,333.15	83,852,854.61	68,513
1909	98,776,374.51	846,741.67	99,623,116.18	84,571
1910	103,404,876.79	2,534,961.52	105,939,838.31	84,933
1911	95,072,996.51	1,862,250.20	96,935,246.71	81,777
1912	94,518,549.38	1,203,424.07	95,721,973.45	87,629
1913	92,530,834.33	1,064,668.26	93,595,502.59	[1] 91,383
1914	92,076,145.51	1,094,734.87	93,170,880.38	[2] 97,120

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[1] Includes 2,219 enlisted men, Quartermaster Corps.

[2] Estimated number of officers and enlisted men, including cadets, Hospital Corps, Philippine Scouts, and enlisted men of the Quartermaster Corps.

Increase in appropriations for "Support of the Army," fiscal years 1907, 1908, 1909, and 1910, due to increase in Artillery Corps, increase in service pay of officers and enlisted men, extraordinary expenses incident to Army of Cuban Pacification, and increase in enlisted strength of the Army.

Appropriations from fiscal year 1911 to 1914, inclusive, represent the minimum amount required to maintain the military establishment consistent with good administration.

Pay of retired officers and enlisted men included in amounts appropriated for "Support of the Army," but number not included in average strength.

Statement showing causes of increase in estimate for 1915 over that of 1914:

The estimates of appropriations as originally submitted by chiefs of bureaus and offices of the War Department for the fiscal year ending June 30, 1913, aggregated the sum of $188,426,499.45, exclusive of estimates for the Isthmian Canal.

Upon a review of these estimates, a reduction of $11,184,313.75 was made, and the estimates as they now stand aggregate $177,242,185.70, or $7,268,298.26 in excess of the appropriations for the current fiscal year (1914) for like purposes.

The increases over 1914 appropriations occur in the following subdivisions of the estimates:

	Appropriated, 1914.	Estimated, 1915.	Increase.
Military Establishment:			
Support of the Army	$93,531,145.51	$99,893,508.65	$6,362,363.14
Militia	6,035,000.00	10,854,250.00	4,819,250.00
Total	99,566,145.51	110,747,758.65	11,181,613.14
Less decrease in Military Academy			41,859.26
Net increase in Military Establishment			11,139,753.88
Public works (military):			
Fortifications	5,299,250.00	9,205,399.49	3,906,149.49
Military posts, etc	820,119.66	2,281,612.10	1,461,492.44
Total	6,119,369.66	11,487,011.59	5,367,641.93
Less decrease in arsenals			37,778.00
Net increase in public works (military)			5,329,863.93
Public works (civil):			
Military parks, etc	457,060.00	558,060.00	101,000.00
Buildings and grounds in and around Washington	370,490.00	388,990.00	18,500.00
Total	827,550.00	947,050.00	119,500.00
Rivers and harbors (decrease)			9,618,889.00
Net decrease in public works (civil)			9,499,389.00
Miscellaneous:			
National cemeteries	292,620.00	335,420.00	42,800.00
Miscellaneous objects	1,086,065.40	1,398,649.85	312,584.45
Total	1,378,685.40	1,734,069.85	355,384.45
Less decrease in National Home for Disabled Volunteer Soldiers			54,765.00
Net increase in miscellaneous			300,619.45

SUMMARY.

Increase:		
Military Establishment	$11,139,753.88	
Public works (military)	5,329,863.93	
Miscellaneous	300,619.45	
		$16,770,237.26
Decrease:		
Civil establishment	2,550.00	
Public works (civil)	9,499,389.00	
		9,501,939.00
Net increase		7,268,298.26

The principal items of increase under "Support of the Army" are as follows:

Contingencies of the Army Prospective expenditures incident to entertainment of visiting foreign officials attending ceremonies, opening of Panama Canal and Pacific Exposition.	$25,000.00
Military aeronautics	175,000.00
Purchase and maintenance of field glasses for Infantry and Cavalry	12,500.00
Purchase of motorcycles	5,000.00
Special Infantry telephone equipment	10,016.00

Signalling equipment for coast defense posts	$12,000.00
Commercial telephone service at Coast Artillery posts	6,000.00
Subsistence of the Army Due to increase in enlisted strength of the Army and increased cost of ration.	703,624.39
Pay, etc., of the Army Due to increase in officers of the line, enlisted men (7,549), additional pay for length of service of enlisted men, increase in enlisted strength of Quartermaster Corps and additional pay for length of service, increase in officers in Corps of Engineers and Medical Department, and increase of pay to retired enlisted men.	2,153,645.52
Regular supplies Due to increased requirements for fuel and forage.	698,616.85
Horses for Cavalry, Artillery, Engineers, etc Due to increased requirements for horses for Cavalry in Hawaii, for horses for heavy artillery, telegraph company for the Signal Corps and one new field hospital and ambulance company; also an item of $50,000 for hire of employees.	240,045.00
Barracks and quarters Due to rentals required by retention of troops in China for which no provision was made in the estimates for the current year, and increased requirements for new buildings at military posts and stations.	271,317.00
Military post exchanges Due to new construction of buildings at Fort Baker, Cal., and Fort McKinley, Me., and the purchase of moving-picture machines, films, etc., for amusement purposes for enlisted men at various posts.	114,391.00
Clothing, and camp, and garrison equipage Due to increase in enlisted strength of the Army and to an amount estimated for a reserve supply of clothing.	500,000.00
Construction and repair of hospitals New construction.	10,000.00
Quarters for hospital stewards Increase considered necessary to adequately provide for necessary buildings and to make repairs to existing buildings.	43,091.00
Medical and Hospital Department Due to increase in the personnel, prevailing high prices of medical supplies and the need of modern improved equipments, and special apparatus for hospital service.	50,000.00
Ordnance stores: Ammunition To procure a reserve supply of ammunition.	50,000.00
Small-arms target practice Due to increased demands upon this appropriation by reason of battle practices and machine-gun target practice, and to increase in number of men in the Army.	75,000.00
Ordnance stores and supplies Required to supply new Cavalry equipment, and to provide harness for five additional batteries of Field Artillery.	200,000.00
Automatic machine rifles Estimated to cover contract authorization contained in Army appropriation act for current year.	150,000.00
Replacing ordnance and ordnance stores destroyed by fire at Benicia Arsenal, Cal	1,349,083.06
Total increase under "Support of the Army"	6,854,329.82

The principal items of increase under "Militia" are as follows:

Field Artillery for Organized Militia	1,100,000.00
Ammunition for Field Artillery, Organized Militia	2,500,000.00
Encampment and maneuvers, Organized Militia	1,000,000 00
Equipment of Coast Artillery armories, Organized Militia	219,250.00
Total increase under "Militia"	4,819,250.00

The principal items of increase under "Fortifications" are as follows:

Gun and mortar batteries		$300,000.00
Construction	$150,000.00	
Modernizing older emplacements	150,000.00	
Fire control at fortifications		25,000.00
Electrical installations at seacoast fortifications		10,000.00
Searchlights for harbor defenses		100,000.00
Sea walls and embankments		40,000.00
Preservation and repair of torpedo structures		10,000.00
Casemates, galleries, etc., for submarine mines		35,000.00
Armament of fortifications		3,113,800.00
Purchase, etc., mountain, field, and siege cannon	$450,000.00	
Ammunition for mountain, field, and siege cannon	2,100,000.00	
Purchase, etc, seacoast cannon for coast defense	208,800.00	
Ammunition for seacoast cannon for coast defense	260,000.00	
Alteration and maintenance mobile artillery	10,000.00	
Purchase, manufacture and test of ammunition, subcaliber guns, etc., for mountain, field, and siege artillery practice	10,000.00	
Alteration of 3.2-inch batteries to rapid-fire field batteries	75,000.00	
Submarine mines		175,000.00
Replacing ordnance and ordnance stores destroyed by fire at Benicia Arsenal, Cal		141,230.49
Fortifications in insular possessions		52,281.00
Fire control in insular possessions		55,000.00
Board of Ordnance and Fortification		15,000.00
Total increase under "Fortifications"		4,072,311.49

The principal items of increase under "Military posts" are as follows:

Military posts	780,000.00
For new construction at Plattsburg Barracks, N. Y., Fort Shafter and Schofield Barracks, Hawaii.	
Seacoast defenses, Philippine Islands and Hawaii	751,632.44
For construction of quarters, etc., for Coast Artillery garrisons in the Philippine Islands and Hawaii.	
Buildings, Engineer School and post, Washington, D. C	50,000.00
For completion of west barracks, etc.	
Military structures, Philippine Islands	154,000.00
To complete the construction of a pumping plant, electric-power plant, and storehouses.	
Total increase under "Military posts"	1.735,632.44

The principal items of increase under "Military parks, etc.," are as follows:

Improvement of Yellowstone National Park	80,000.00
Improvement of Crater Lake National Park	25,000.00
Total increase under "Military parks, etc.,"	105,000.00

The principal items of increase under "Miscellaneous" are as follows:

National cemetries	26,000.00
Road to national cemetery, Newbern, N. C	15,100.00
Artificial limbs	190,000.00
Survey of northern and northwestern lakes	50,000.00
Prevention of deposits, harbor of New York	71,000.00
Total increase under "Miscellaneous"	352,100.00

The foregoing increases aggregating $16,770,000 in round numbers, are offset by decreases in the estimate for civil establishment (salaries, etc., War Department), Military Academy, arsenals, rivers and harbors, and National Home for Disabled Volunteer Soldiers, aggregating in round numbers $9,500,000, making the net increase in the estimates $7,268,000.

ARMY LEGISLATION.

ENLISTMENT AND RESERVES.

It is believed that legislation should be had modifying the present enlistment contract so as to give an enlistment which will permit a man's transfer to the reserve after a year's service, provided he is a well-trained soldier, as determined by his company and post commanders. A man so transferred would serve the balance of his enlistment period with the colors in the status of a soldier on furlough without pay, but under obligation to come to the colors in case of war, and for instruction at maneuvers, if deemed advisable, for not to exceed 6 to 10 days every other year. Whatever system of reserves is adopted, it should provide ultimately, when the reserve is in full working order, for a total reserve service of at least two and one-half times the service with the colors. In the early stages of building up a reserve it will be necessary to enlist men directly in the reserve—men now in the population who have had previous military service. The provision for a reserve must provide for a paid reserve for all men except those who are serving the balance of their active enlistment in the reserve on a status of furlough. It is not believed that men will enlist in the reserve under present conditions. The amount to be paid reservists must be determined by Congress. It need not be much, and it is safe to say that we can secure a reserve under conditions as to cost which will give us 10 reservists for the cost of 1 man with the colors. The reservist must be assured that he will be called upon for service only in case of war, and possibly for an instruction period every other year of not to exceed from 6 to 10 days, during which period he would receive full pay and allowances, transportation, etc. According to a rough estimate by the Adjutant General's department, there are now in the civil population about 90,000 men who have left the service during the past 10 years and are still of military age. This is believed to be a conservative estimate. In addition, there are large numbers of men who have had service during the Spanish-American War, in the Philippine Volunteers, and others who have had other military service, from which a reserve of well-instructed men could be drawn if any inducement is given them to join the reserve. It is unfortunate that the wording of the present law is such that it is to the financial advantage of a man to keep out of the reserve; i. e., a man who intends to come to the colors in time of war will get more money if he stays out of the reserve and comes back from a civil status at any time within six years of his discharge than will the man who serves in the reserve during this period. The man in the reserve is, moreover, on the status of a soldier, whereas the men who do not enlist in the reserve are entirely separated from the service. All this tends to keep men out of the reserve. We can not secure valuable service for nothing.

One thing is absolutely certain, and that is that we must have an adequate reserve if we are to consider ourselves in any way properly prepared for a possible war. The department has now under consideration a proposed modification of the enlistment contract, with reserve features, which it is hoped will be presented for the consideration of Congress during the coming session. The necessity for a reserve having been accepted by Congress in the legislation enacted during the last session, it now only remains to perfect it. This, in my opinion, is the most important Army matter which has been before Congress in many years. Our mobile army within the limits of the continental United States, while efficient, is so small that it only amounts to about 6 per cent of the force which it would be necessary to call to the colors in the early stages of a war with a first-class power. The militia could probably furnish 19 per cent, leaving a balance of practically 75 per cent to be made up of men necessary to fill up the Regular Army and militia to full statutory strength and of volunteers.

It is only necessary to give this matter superficial attention to appreciate the extreme gravity of the present situation and the necessity for providing an adequate reserve of trained men for both Regular Army and militia.

To fill up organizations to full statutory strength with uninstructed men would be to destroy largely their efficiency; to fail to fill them up would be to leave them so small that they would have relatively little power. They must be filled up to full statutory strength by instructed men to attain their full efficiency, and the losses of the first months must be made up from the same class of men. This can be done only through a reserve. We must remember that we have never yet been engaged in war with a first-class power prepared for war under conditions in any way approaching the conditions of military preparedness which exist among civilized nations to-day.

The present system does not represent either a wise or economical expenditure of the funds intended to insure military preparedness.

I have also the honor to invite attention to the necessity for building up, with as little delay as practicable, a reserve of officers qualified to serve as company officers of reserves or volunteers. If we were called upon to mobilize to meet a first-class power, we should require immediately several thousand officers; where are we to get them? This is a matter of vital importance, and one which should be attended to at once and not left to the rush, hurry, and confusion preceding a war. I am of the opinion that it would be practicable to select from the graduating classes of those military schools at which we have officers of the Army as military instructors, on the recommendation of such instructors, 400 men each year who could be commissioned as provisional second lieutenants in the different line branches of the Regular Army, including Coast Artillery, for a period of one year, subject only to physical examination, to receive the full pay and allowances of a second lieutenant, to be junior to all second lieutenants of the Regular Establishment, and to be discharged at the end of one year with a certificate of proficiency, if they merit it, as company, troop, or battery officers of militia, volunteers, and the Regular Establishment in war. I believe that a proposition of this kind on the part of the Government would meet with a generous response and that it is a practicable way of providing a reserve of officers. The results obtained would justify the expense. The men thus trained would have had from two to four years' military instruction under officers of the Army, plus a year in the Regular Establishment;

certainly good preparation at relatively little cost. From these young men selection could be made, from among such as desired permanent appointment to the Regular Establishment, to fill vacancies from civil life, such appointment to be made subject to the prescribed mental and physical examinations.

One thing is certain: We shall require many thousands of officers, in addition to those of the Regular Establishment, and steps should be taken to provide them in time of peace and not throw away thousands of lives on account of lack of most necessary preparation through use of means ready to our hands.

NOTE.—I publish again this year the graphic charts showing the total strength of the armies of our own and other countries on peace and war footings, also the chart showing the comparative strength of the Field Artillery of our own and other countries. Appendixes 2, 3, and 4, respectively.

RESERVES.

SUPPLIES.

The urgent deficiency at present is, as it has been for many years, in the shortage of Field Artillery guns and ammunition, a shortage of such vital importance as to constitute a grave danger and to jeopardize seriously the possibility of success in case of war with a well-equipped nation. The matter has been emphasized in previous reports, and I again most earnestly invite attention to the alarming condition of shortage in these absolutely essential supplies. The present appropriation bills carry larger appropriations than heretofore asked for, but even if granted in full they will supply only a portion of our deficiency in this particular. Adequate provision to meet this shortage should be made without further delay. It must be done quickly. Several years will be required at best, and it is earnestly hoped that the full amount requested this year will be granted.

DETACHED SERVICE AND DETAIL SYSTEM.

The number of officers on detached service on June 30, 1913, was:

General officers and officers of staff corps and departments	103
Officers of the line	647
Total	750

The term "detached service" is, in a certain sense, misleading. All the so-called detached officers are serving under proper authority, and nearly all of them upon duty connected with the Army, militia, or military education. Much of this service is under the detail system and the remainder is incident to the policy of detailing officers as inspector-instructors at colleges, schools, etc. While the tax upon the Army is a heavy one, the disadvantage is far more than compensated for by the benefits resulting in the way of more efficient performance of staff duty and the dissemination of military education. The staff corps are vastly more efficient as a result of the detail for duty therein of officers fresh from duty with troops. In my opinion no legislation of recent years, with the possible exception of that establishing the General Staff, has been of more benefit to the Army than that establishing the detail system, and it would be to the great advantage of the service if all the officers in the permanent Staff Corps, with the exception of the engineers, medical, and chaplains, could be transferred to the line, available for detail in the staff corps according to fitness. A number of officers equal to those transferred would have to be immediately detailed to perform the various staff duties, but they would all belong to a common body (the line of the Army), and the efforts of the permanent Staff Corps to continue their separate existence would disappear. There would be no interference with promotion, nor would the members of the present staff corps lose any of their present advantages; in fact, a wider field would be open to them. The staff corps would be composed of men much more closely in touch with the sentiments and needs of the line. There would be more cooperation and greater efficiency. The Army is gradually approaching a status where all Staff Officers will be under detail (excepting engineers, medical officers, and chaplains), but is approaching it under conditions which must tend to inefficiency rather than efficiency. As no more permanent appointments are now made in the staff corps and as the law provides that the heads of these corps must be selected from the permanent officers as long as any such remain, a condition will soon arise under which selection of the heads of the staff corps will be limited to a very small number of officers of advanced age, and eventually to one or two, one of which must be selected regardless of his fitness; whereas if the transfer suggested were made, the field of selection would be the entire body of line officers of suitable rank. It is most important to avoid this unfortunate condition, which is now rapidly approaching. Detailed officers of the Staff Corps who have had recent and extensive experience with troops are much more efficient in all matters that pertain to the discharge of the more important portion of their duties than officers who have not had such experience. I refer to those duties which directly affect the efficiency of the line of the Army.

It is true that an officer recently detailed from troops may be somewhat less familiar with the purely clerical features of the paper work of his department, but his practical knowledge of the needs of troops is so much greater and his appreciation of the conditions under which they are living so much keener that he is a more efficient officer when measured by the standards which require thorough personal knowledge of what the Army is really doing and what it needs.

A return to the old system of commissioning officers permanently in the various staff corps and departments would be a great misfortune to the Army and a most serious blow to progress and efficiency. Officers permanently detached from troops eventually lose touch with their needs, and the paper side of the Army little by little replaces the soldier, to promote whose efficiency the staff corps are maintained.

A bill has recently been referred to the department to govern the detached service of field officers. The bill follows the general policy established in the detached service legislation applicable to line officers up to and including the grade of captain. The purpose of this bill is to insure two years' service with troops in each period of six. From the standpoint of military efficiency it is believed to be a sound principle. It should not be retroactive, and the President should be given discretion as Commander in Chief of the Army in case of emergency or special requirements to disregard the provisions of the law in selecting officers for positions requiring special qualifications. A provision should also be inserted providing that detached service on duty of a military character, not exceeding two months in each year, will not be counted as detached service in the sense of the bill.

A similar provision should also be made with reference to company officers. At present all detachment counts, even absence sick in hospital from wounds, or disability incident to the performance of duty.

It is of the greatest importance that places should be provided in the arms or departments from which bureau chiefs were appointed, to which they could return in case it is not deemed advisable to reappoint them. The provision should be of the character made for the Chief of Coast Artillery, whose name is carried in the list of colonels of Coast Artillery, moving up with the normal flow of promotion. Under the present system it is necessary either to compel a bureau chief to retire, or drop him out of the service through failure to reappoint him, or to reappoint him. The system serves to defeat the detail system so far as the head of the corps is concerned and forces the President to accept an officer as head of a corps or department whether he wants him or not, or to assume the responsibility for forcing his retirement or dropping him out of the service, a condition which is manifestly unfair both to the administrative and to the officer and one which should be corrected. It is, moreover, one which tends greatly to inefficiency.

VOLUNTEER BILL.

Four years ago the President sent a special message to Congress urging the enactment of a law for raising a volunteer army in time of war. A bill was introduced to carry this recommendation into effect, but as a result of certain objections developed in the course of a hearing before the Military Affairs Committees of the Senate and House, subsequent bills were substituted for the first one. Finally a substitute bill was reported. This bill is without doubt better in many respects than the original bill, and its favorable consideration by Congress is urgently recommended. Its enactment will cost nothing in time of peace and will save the Government millions of dollars in time of war.

COUNCIL OF NATIONAL DEFENSE.

It is earnestly hoped that Congress will provide a council of national defense. The proposition has received the approval of the former President, Secretary of War, and Secretary of the Navy. The existence of this council would do much toward making practicable the formulation and execution of a consistent and continuing policy of national defense, would be of great assistance in coordinating the plans of the Army and the Navy, and would furnish a means of reconciling the military and financial interests before submitting to the President and to Congress measures for national defense. I consider it to be a measure of the very greatest importance and one which would have great weight and influence in securing a sound military policy.

ELIMINATION OF UNFIT OFFICERS.

I attach hereto as Appendix 5, my views on this subject as published in my last annual report.

Some system which provides an adequate means of eliminating the unfit is absolutely necessary. We have no such system at present. Ability and merit, while giving an officer standing among his fellows, do not aid in his advancement and promotion, except in the Ordnance Department and in selection for general officers. Progress is in a lock step in which the least fit and the best keep their relative positions until in too many cases ambition is killed. This condition does not make for efficiency, nor would it be tolerated in any well-organized business.

The General Staff has been engaged for some time in the study of the question of personnel, and it is hoped that its report will be in shape to embody its essential propositions in proper form to be presented to Congress during the next regular session.

The ineffectiveness of the laws governing examinations for promotion in freeing the service from officers who are not up to a good standard is made apparent by an examination of the statistics upon the subject. The requirement of a successful examination as a condition precedent to promotion was extended to the line of the Army in 1890. From that time until the reorganization of the Army under the act of February 2, 1901, but one officer was eliminated from any branch of the Army as a result of the operation of this act. If 50 had been so eliminated during these 11 years, the act would have been chargeable with entire inadequacy to fulfill its designed function; but the failure to relieve the service of a single one of the number of officers whom all who were familiar with it knew to be incompetent, throws the law out of consideration as a measure of efficiency. The increase of the number of officers by approximately 50 per cent, under the act of February 2, 1901, brought in a large number of officers who had had but little scrutiny to ascertain their fitness, as was natural. The glaring disqualifications of some of these, coupled with the fact of insufficient time to establish sympathetic relations with officers in general, resulted in a few eliminations under the operation of the act. But in 12 years, including 1913, this number, in the line of the Army, was limited to 18, of which 10 went out during the first half of the period and 8 during the second half. During the years 1911 and 1912 there were no discharges from this cause. The inadequacy of this law to serve its purpose needs no further comment.

TACTICAL ORGANIZATION OF THE ARMY AND ITS DISTRIBUTION.

The plans put into effect last year have been, on the whole, satisfactory. Minor modifications have been required, but the ultimate effect is going to be a decided improvement in efficiency.

Hawaiian Islands.—The garrison of the Hawaiian Islands has been increased by one regiment of Infantry, and there are now also eight companies of Coast Artillery on duty in the islands. Three additional regiments of Infantry will have to be sent to the islands to complete the Infantry garrison unless a larger regiment is authorized for the insular possessions, in which case only one regiment more of Infantry will be required.

Panama Canal Zone.—The garrison in the Panama Canal Zone has not been materially increased as quarters are not yet available. It was expected that canal buildings would be available this fall, but recent information is to the effect that no considerable number will be available until next spring. It is desired, in garrisoning the Canal Zone, to utilize as far as possible the buildings now in use by the canal force. Estimates have already been presented for the necessary barracks and quarters for the Coast Artillery, as these troops will be so placed that it will not be practicable to use canal buildings to any extent.

CAVALRY.

With a view to standardizing the instruction imparted at the Military Academy and at the various service schools on the subject of the employment of Cavalry, the policy of the War Department was summed up in Bulletin No. 18, War Department, dated October 3, 1912, attached hereto as Appendix 6.

During the past year the arduous patrol duty along the southern border has been efficiently performed in great part by the Cavalry. Six regiments have been and are now actively engaged in this work, while a seventh is with the division mobilized at Texas City. This service has entailed hardships on the mounts and will necessitate a larger estimate for purchase of horses. Two of the regiments most deserving of change of station to a northern climate, the Second and Fifth, are now under orders to exchange with the Tenth and Fifteenth.

The marked improvement begun several years since in horsemanship and betterment of mounts has been noteworthy during the past year. In this matter the Mounted Service School at Fort Riley has been of the greatest value. The importance of this school would be enhanced if it were situated in a section of the country where riding and riding competitions are more general, and the removal of the Mounted Service School to such a region is recommended.

During the summer a Cavalry camp, consisting of two regiments and two squadrons of Cavalry, has been established at Winchester, Va., for the special purpose of considering the question of a revision of the Cavalry Drill Regulations, which are obsolete and need thorough revision, and for the further purpose of carefully considering the question of regimental reorganization for the Cavalry, a subject concerning which there has been a great deal of discussion of recent years. It is one of such vital importance that no hasty action should be taken, and any change made should be based on full and careful study of all aspects of the question.

In 1912 a board of officers was sent abroad to study the organization and methods of instruction employed in European cavalry. On the return of this board the data collected were carefully gone over, with a view to applying, in a practical way, the result of the board's observation and study, and for this purpose the camp above referred to was established.

The original membership of the board was modified somewhat in accordance with the necessities of the service, and as reorganized directed the work at the Cavalry camp. The board has recommended a regiment of 6 squadrons, and has prepared tentative drill regulations for such an organization. These drill regulations have been ordered issued to all Cavalry regiments, which will be organized into 6 provisional squadrons for drill only. Legislative action would be required to change the number of administrative units, now 12, to a smaller number. The report of the Cavalry board is attached hereto as Appendix 7.

NOTE.—The board as originally appointed consisted of Brig. Gen. E. J. McClernand, Col. James Parker, Lieut. Col. Joseph T. Dickman, and Maj. Jesse McI. Carter. As modified, the board consisted of Brig. Gen. E. J. McClernand, Col. C. H. Murray, Lieut. Col. J. T. Dickman, Lieut. Col. F. S. Foltz, Maj. J. McI. Carter, and Capt. Frank Parker.

It is hardly necessary to say that the only Cavalry organized along Infantry lines is our own, and that the Cavalry drill regulations of the great powers are uniform, as are their Infantry and Artillery regulations, to which ours (Infantry and Artillery) already conform.

At the Winchester camp special consideration was given to mounted work and leading, without sacrificing in any way the superiority of our Cavalry in fighting on foot. An earnest effort was made and sound results obtained in demonstrating that our Cavalry properly trained is the peer of any mounted troops. The standard set by the Cavalry at Winchester could hardly be attained by militia or volunteers, but it is the standard that all regular Cavalry should reach. These troops would be equal to any mounted work required of them, and would, on foot, be the equal of any mounted Infantry; on the other hand, mounted Infantry or indifferently trained Cavalry could not do the mounted work of such troops.

For the purpose of improving swordmanship in this branch, a course has been established at the Mounted Service School. It is believed that rewards for swordmanship should be commensurate with those for shooting.

The remount stations have made as much headway as could be expected, in view of the limited appropriations. They are of great importance in developing markets and breeding, and in establishing conditions which will in the future, or in times of stress, accrue to the benefit of the mounted service.

The Cavalry Equipment Board devised a saddle with equipments that has satisfactorily withstood long and severe tests, and has been adopted. One very great advantage of the work of this board has been the determination of a better method of carrying the rifle and saber, which were formerly suspended each under a leg of the trooper. The new equipment is lighter, more compact, more complete, and more economical than the old.

After very exhaustive trials a new automatic pistol, caliber .45, has been adopted, and troops using it will be trained under new firing regulations now being prepared for it.

Due to the time required to prepare Cavalry for active service and the absence of a trained reserve, this branch, as far as may be consistent with the maximum authorized for the mobile army and the welfare of the Infantry and Artillery, should be maintained at as near full strength as practicable, at least until a trained reserve is available from which it can be filled up.

The success of Cavalry training by brigade emphasizes the importance of having Cavalry so stationed that regiments can be readily assembled by marching for brigade training. Whether this should be in the form of brigade posts or posts so near each other that troops can meet for instruction during the year is not important, except that it is generally more economical to administer a command employing one heating and lighting plant, water system, etc., than the same command employing several independent systems of this kind.

I desire to emphasize that the Cavalry work at Winchester has been in the nature of an investigation or study of our own and other methods with a view to adopting what seems best for our own Cavalry. There is no intention or thought in this work of in any way diminishing the amount or the efficiency of the dismounted work of our Cavalry; in fact, it is desired, if possible, to augment it. There is, however, a very distinct intention and earnest desire to increase its mounted efficiency, which has not been satisfactory. I refer to its efficiency as Cavalry, wishing thereby to emphasize the distinction between Cavalry and mounted Infantry. Too many of our Cavalry officers have unconsciously drifted into a conception of a use of cavalry which means nothing more or less than mounted infantry. They speak vaguely of our peculiar terrain and conditions and are of the opinion that mounted shock action is a thing of the past and that the use of the saber is practically finished. If these views were sound there would be little justification in maintaining so expensive an arm as well mounted cavalry, but they are not. They come, I believe, from lack of experience and observation and from long service in petty operations of a police character involving the use of small bodies of troops. European armies, living always in the shadow of war, are devoting every energy to building up good cavalry. They are falling in now rather rapidly with our ideas concerning dismounted work, but they are not in any way diminishing their thorough preparation for mounted action. It is quite probable that the majority of action will be dismounted, but there will be occasions when mounted action will be required, when it will be fatal to the success of our Cavalry if it is not well prepared to meet this less frequent but very important requirement of war service against well-trained cavalry.

The question of the retention of the pistol has received much attention during the past year. The majority of Cavalry officers favor its retention and consider it a valuable and necessary addition to the cavalryman's weapons. Radical changes in the course of firing for the pistol are under consideration at this time, the principal object of which is to improve the quality of mounted pistol shooting.

FIELD ARTILLERY.

The Field Artillery has made satisfactory progress during the past year so far as its training is concerned. This progress has been manifested especially in increased efficiency in target practice. The modern field gun is a weapon of such great accuracy and rapidity of fire when handled by a highly trained personnel that it is impossible for any troops, without such losses as are prohibitive, to advance over a terrain swept by its fire. It is therefore necessary not only that the existing Field Artillery be trained to the highest possible degree but also that our armies be furnished with an adequate amount of Field Artillery sufficiently trained to at least neutralize the fire of any field artillery that may reasonably be brought against us.

We are slowly accumulating a reasonable supply of guns, but, as fully set forth in my last report, the Organized Militia is almost hopelessly behind in the number of batteries which they should maintain in proportion to their infantry strength, and the regular Field Artillery can not at its present small strength furnish even half the guns necessary for the Regular Army. Without these guns our Army as a machine is not efficient. One of the most important parts is lacking.

Attempt has been made during the past year to send officers of Cavalry and Infantry of the Regular Army to the School of Fire, so that if given command of independent fighting units they may know the capabilities of modern field artillery and what may reasonably be expected of it in the support of other arms. Due to the excessive demands of service, it has been impracticable for these officers to attend, but continued efforts will be made to carry out the policy in the future. Steps have been taken to require the attendance at service target practice of all Field Artillery officers on detached service.

The organization for the Mountain Artillery, as proposed by the Field Artillery Board, has been tested, and a manual embodying this organization and other desirable information has been published. The new Mountain Artillery pilot gun has been tested by the Ordnance Department, and a battery of these guns will shortly be issued to the service. The Fifth Field Artillery has been equipped with heavy field artillery matériel. The drill regulations for the guns and howitzers of this class are being prepared. It is hoped that during the coming year some batteries will be created in the Organized Militia, so that they may be equipped with this heavy matériel. Efforts have been made to develop a new field gun carriage giving an increased field of fire, so as to follow a moving target, and with a combination gun and howitzer effect. It is believed that in the near future this problem will be solved. Range finders have been extensively used, with promising results. A tractor has been purchased abroad for use in moving heavy field artillery matériel (siege type) across country, and attempts will be made to develop this class of tractor in this country.

A battalion of the Third Field Artillery has been in camp at Tobyhanna, Pa., since June 18. The conditions at the camp make it available for work from May 1 to September 30, and it is believed that all batteries in the Organized Militia in the Eastern and Central States should attend this encampment. A tract of land containing about 20,000 acres is available and gives excellent facilities for service target practice, an essential feature of instruction for the Organized Militia, which heretofore has been slighted. The development of this camp in the future will lead to a school for batteries of the Organized Militia, resulting in greatly increased efficiency for these organizations. The work at the camp this summer has been excellent.

Attention is invited to the statements in my last report as to the great shortage of Field Artillery. This branch of the service is so inadequate in the three particulars, number of organizations, amount of matériel, and ammunition existing, that it is incumbent upon all in authority frankly to present the facts to Congress, the only body that can correct the deficiencies.

As to matériel and ammunition, the existing shortage constitutes a serious menace to the public safety in case of war. Once hostilities have begun with a first-class power, there will be no opportunity to purchase abroad nor time to manufacture at home. Even with all available plants in the country running at maximum capacity, so much delay would ensue as to be fatal to our hopes of a successful campaign. The present shortage, which is one of the most serious features of our military situation, constitutes a grave danger, yet it is one readily relieved at the present time by providing adequate appropriations. Later the relief may be too late. Were war to come while we are so inadequately provided with field-artillery matériel, and especially with ammunition, our chances of success would be seriously prejudiced.

The United States has adopted the proportion of 3.16 guns per 1,000 gross Infantry and Cavalry. This is a smaller proportion than that adopted by any other first-class power in the world, yet it is all that we are striving to obtain. Neither are we asking for a large reserve supply of Field Artillery ammunition, but merely for the amount that the guns must have on hand at the time they take the field. While we are gradually and slowly accumulating a reasonable supply of guns (having now about one-half the number desired), the ammunition for these guns already manufactured is far behind. I invite attention to my remarks on this subject in last year's report, and also to my statements in hearings before military committees of Congress. During the past year, in converting the Fifth Field Artillery from a light regiment to a heavy one, it was necessary to issue obsolete guns simply because we have not sufficient ammunition to supply the modern heavy guns and howitzers already manufactured. We can, within a year, from deliveries of ammunition now under contract, provide our regular batteries with their initial field allowance, but we can only partially supply the batteries of the Organized Militia with their field allowance, and can not supply a single round to any volunteer batteries that may be raised. There is no reserve supply for either Regular, Militia, or Volunteer batteries, and it must be remembered that "guns without ammunition are a burden to their friends, preparatory to becoming a trophy to the enemy." We are not asking for a reserve supply of ammunition to last during a campaign, but merely for enough to enable guns already manufactured to take the field. Every gun may be expected to fire 200 rounds in a day's battle, and all of our limited number of guns may be expected to be in action within such a short time of each other as to preclude the feasibility of taking ammunition from one gun and diverting it to another, in an effort to relieve the shortage. Ammunition used during the day must be replaced from the general supply during the night; in other words, there must be on hand at the outbreak of war sufficient ammunition for at least one engagement. This is not now the case. It must never be forgotten that battles are won only by superiority of fire, and modern battles show that the Field Artillery alone furnishes this superiority in the early stages, and contributes to it during the entire action. Infantry, when confronted by an enemy strong in Artillery, can not even advance to the position where their weapons first become effective, without prohibitive losses, except under the protective fire of its own Field Artillery. It may be said, therefore, that success in war will depend more than ever before on Field Artillery.

But even assuming that guns and ammunition will be supplied in reasonable amounts, the guns will not operate themselves, and the previous training of the personnel to utilize efficiently the tremendous power of the guns is absolutely essential.

In so far as the Regular Army is concerned, there are within the continental limits of the United States 21 regiments of Infantry and 12 of Cavalry. If these troops were organized into three Infantry divisions and two Cavalry divisions, they would require eight battalions of light, six battalions of horse, one battalion of mountain, and six battalions of heavy Field Artillery. When the Field Artillery for the Panama garrison leaves the United States there will be left in this country but two battalions of light, one regiment of horse, one regiment of heavy, and one battalion of mountain artillery. There is therefore existing a shortage of six battalions of light, three of horse, and three of heavy Field Artillery, and a reorganization of the existing horse and heavy regiments, so as to give to each regiment a three battalion organization of two batteries each. Field Service Regulations prescribes a certain amount of Field Artillery for each Infantry division; yet the shortage of Field Artillery is so great that not a single division in the Regular Army has the prescribed amount, and one division has no Field Artillery at all. Were we forced into hostilities with any first-class power, we should have to organize many volunteer batteries. It is idle to think that such units, hastily created on the outbreak of war, will have much real efficiency unless they have a nucleus of trained men. These trained men at present do not exist, and they will not until our regular Field Artillery has been sufficiently increased to provide for the needs of the Regular Army and to furnish a nucleus of trained reserves to man, partially at least, and officer volunteer batteries. It is our settled policy to depend for defense upon a small Regular Army and a large citizen soldiery brought into the service of the United States upon the outbreak of war. Such soldiery is of small value unless we can provide it with arms and ammunition. This we can not do now in the Field Artillery. At the present rate of appropriations it will take many years to create a reasonable supply of guns, carriages, and ammunition. And in addition, to avert catastrophe, we must have sufficient organizations of the Regular Army, training men in time of peace to come to the aid of the new batteries when organized.

To summarize the recommendations made above, and also to include others not discussed, it is believed that the vital needs of the Field Artillery are:

(*a*) An increase of twelve battalions (in five yearly increments).

(*b*) The organization of the ammunition service.

(*c*) The appropriation of moneys sufficient to provide ammunition for the existing guns when they take the field.

(*d*) Legislation to furnish the desired officers and trained personnel for the mobilization of Field Artillery in war.

Attached see Appendix 8, containing the views of Gen. Hunt, who was Chief of Artillery of the Army of the Potomac from September 5, 1862, until the close of the Civil War, for, due to defects in the organization, equipment, and supply, and the lack of officers, the chief of this great and expensive arm found it defective and could not make efficient use of it.

COAST ARTILLERY.

The Coast Artillery service for the past year has maintained its high standard. Its efficiency has attracted the attention of other Governments, especially those of South America. An officer of the Coast Artillery of the United States is giving instruction to the Chilian coast artillery, and two Chilian officers are taking the course of instruction at the Coast Artillery School. The Government of Brazil has shown active interest in the coast defenses of the United States. Permission has been granted the Government of Brazil to send two officers to the Coast Artillery School to enter the next class.

There is no better measure of efficiency of this arm of the service than the results of its target practice. This has been maintained at a high average percentage of hits. For the first time the Coast Artillery as a whole has been required to have practice at night at moving targets. It is encouraging to note that the reports received give evidence that night practice is almost as accurate as day practice.

The administrative organization of the Coast Artillery has been modified during the past year by grouping the fortifications into three districts. The object of this modification is to obtain improved administration and better results in maintaining efficiency and in standardizing means and methods of Coast Artillery service. All of the fortifications on the Atlantic coast from Maine to New York have been grouped into one district, known as the North Atlantic Coast Artillery District, those from the Delaware River to Texas have been grouped into a second district known as the South Atlantic Coast Artillery District, and those on the Pacific coast into a third, known as the Pacific Coast Artillery District. The officers in command of these districts, respectively, are charged with all matters bearing upon the instruction of the personnel and the efficiency of the armament and its accessories. The results have been encouraging and justify the arrangement.

A further administrative change has been made during the year in providing that the administrative and staff duties of coast defense commands shall, in so far as Coast Artillery officers are concerned, be conducted as a unit within each coast defense command. Some coast defense commands include two or more forts. Each fort has had, heretofore, its own commander and a separate administrative staff. The change provides for but one commander of these smaller fort groups and but one set of staff officers. Now all staff duties connected with the furnishing of supplies, their storage and their issue, are performed by one set of staff officers at the headquarters of the coast defense commander. The effect of this has been to reduce materially the paper work connected with such staff duties, and to release quite a number of Coast Artillery lieutenants from staff duties to their combatant duties.

The approved system of fixed coast defenses, both for home and oversea ports, is well advanced toward completion. In the United States proper additional fortifications will be necessary for the entrance to Chesapeake Bay and for San Pedro, the port of Los Angeles. Appropriations have been made to initiate both of these projects; these fortifications should be pushed to completion at as early a date as practicable. The increasing importance of the city and port of San Diego and its strategic location call for consideration with a view to strengthening the coast defenses there by additional heavy batteries.

A board of officers of the Army and Navy appointed for the purpose of preparing a scheme of defense for the naval base of Guantanamo, Cuba, submitted its report in April, 1913. The estimated cost of the project for the Army, including not only coast defenses but also land defenses and barracks and quarters for the mobile garrison, is $10,275,000. The first necessity for the development of Guantanamo as a protected naval base is the procurement of a supply of fresh water adequate to the needs of the proposed establishment. The board believes that such a supply can be secured.

It has been necessary to transfer several Coast Artillery companies from home defenses to Oahu. These companies are now living under canvas. As the oversea defenses are completed and turned over to the Coast Artillery for service, manning bodies will have to be provided for them. It therefore becomes urgent that Congress make definite provision for an increase of Coast Artillery troops and for barracks and quarters for their accommodation.

Under the new organization of the Coast Artillery districts and the assignment of Coast Artillery officers of high rank and wide experience to command them, a much larger measure of local control should be vested in these commanders, and much of the detail work now handled in the office of the Chief of Coast Artillery transferred to them, questions of policy, technical instruction, matters of coordination, assignment of district staff and higher officers being left to the chief's office.

INFANTRY.

The discipline and instruction of this arm have been satisfactory throughout the past year, with the exception of instruction in the use of the bayonet, which continues to be unsatisfactory.

The Infantry organizations in the Philippine Islands have been brought up to their full statutory strength, and an effort is being made to place those in the Hawaiian Islands upon a similar footing, also the regiment in the Canal Zone; but the difficulty experienced in securing recruits during the year has made progress rather slow in this direction.

The new Infantry equipment has been issued to 14 regiments, and its issue will be gradually extended to the remaining regiments.

It is most essential to have such increase in the Infantry as will enable us to complete three tactical divisions within the geographical limits of the United States. If the regiments abroad are maintained at full statutory strength, ten additional regiments will be required to accomplish this; if, however, the foreign service regiments are brought up to a maximum of not less than 200 or more than 250 men per company, this can be accomplished with an addition of six regiments.

The question of increasing the foreign service regiments on the lines above indicated is now being considered. It presents a regiment about the size of the French and German regiments. It will reduce the ultimate number of Infantry regiments on foreign service to nine, and enable us to keep them all fully officered. As these regiments can not in all probability be reenforced in the early stages of war, it is believed that they will be none too large to meet the demands which may be made upon them as infantry operating in certain prescribed limits. They will be, in effect, fortress infantry. Moreover, the large company is used in the best foreign armies, where infantry organization is not only of the greatest importance, but a matter of constant care and study.

A very considerable saving can be made in the initial cost by use of the large regiment—something over $1,200,000. It will also result in a larger number of organizations at peace strength being left in the country, for possible expansion in case of war.

The question of equalizing the foreign service of noncommissioned officers not only of Infantry, but of the other arms, is now under consideration, and a procedure will probably be announced under which sergeants serving in organizations abroad will be transferred to the United States without loss of grade, their place being taken by noncommissioned officers in the United States, thus avoiding a great injustice to this most important and valuable portion of our enlisted personnel.

With reference to enlisted men serving in the Philippines, it is believed they should, when discharged, if they so desire, be reenlisted in Infantry regiments serving on the Pacific Coast. This would enable transfer to the home country for the necessary change of climate, with the minimum of expense, as the move is made almost entirely by transport. It is believed the best interests of the Government will be served by not permitting, under any circumstances, men or officers to serve in the Philippines more than six consecutive years. Failure to observe this rule will probably result in a degree of disability incident to climatic effects which would ultimately cost the Government more than the slight cost of transfer.

The desirability of maintaining the foreign service organizations has been referred to in previous reports; nothing has been experienced in the past year which in any way argues against such continuance. It gives us on the ground an organization, two-thirds of which are veteran and thoroughly familiar with the conditions under which serving. It also permits regularity and uniformity in the detail of officers for foreign service and will lead to far greater permanency in the location of home regiments. In addition, it should result, ultimately, in the development of a considerable amount of regimental recruiting, which, if successful, will effect economies.

The garrison for the Philippines, Oahu and Panama, are all from our Army of 100,000 men and we shall require this full number in the immediate future if home organizations are filled up with needed units and kept at reasonable strength.

PHILIPPINE SCOUTS.

These excellent native troops have maintained their previous high standard of efficiency, and have always shown themselves to be loyal, willing troops, equal to any responsibility placed upon them. In view of the demands upon the Infantry of the line incident to providing garrisons for the insular possessions, the Canal Zone, and Alaska, and the great desirability of stronger companies in the home regiments, at least until an adequate reserve has been secured, I am of the opinion that the Philippine Scouts should not be included in estimating the strength of the Army. Their exclusion would permit the organization of the Infantry, Field Artillery, and Engineers necessary to complete three tactical infantry divisions in the continental United States, which should be done as soon as possible.

NONMILITARY DUTY—EXCESSIVE PAPER WORK—POOR ADMINISTRATIVE METHODS.

The formation of a service corps has resulted in a large measure in relieving troops from certain classes of work which, while not strictly military, has had to be performed at Army posts and in the field. The effort to reduce the amount of paper work in the Army is being continued, and a constant advance has been made in this direction. A board is still at work on this most important matter—important because paper work now absorbs altogether too much of the time of officers and men—time which could be spent to much greater advantage in military work. The new muster and pay rolls have tended greatly to simplify work connected with the preparation of these papers. The unit system of administration in Coast Artillery districts has also been applied and has resulted in a great reduction in the amount of correspondence and returns or will be a saving in personnel. Progress has also been made in other directions, notably in reducing the number of returns for property at posts through the establishment of a property officer at each post who is responsible for most of the property. There still remains, however, much to be done. Considerable latent opposition comes from the clerical force itself, which seems to fear that a reduction in the paper work will be attended by a loss of position. The recommendations which I have hitherto made have been to the effect that no clerks be discharged, but that no new appointments be made until the total number has been reduced to the lowest number consistent with the efficient performance of duty.

There is still altogether too much concentration of administration. The scope of the administrative authority of the department commanders should be amplified, and I believe that the administration of all military departments should ultimately be placed upon the same status as is that of the Philippine Department and that of Hawaii. The only important objection to this has been incident to a desire to control the construction of barracks and quarters, etc., thereby securing uniformity of type, and obviating changes due to individual ideas and policies of department commanders. It is believed that this can be obviated by necessary orders.

It is most important that existing utilities of towns and cities adjacent to military posts should be made use of, and that the number of independent plants, such as light and power plants, should be reduced to the minimum. The apparent economy in the maintenance of these is not always real economy. There is always a loss of military efficiency through the detail of officers and men to supervise them, and a money loss through the depreciation of the plant, which is sometimes not fully realized. In case of the withdrawal of the troops, the expensive plant is left idle and subject to deterioration—a condition which would not pertain to such an extent when local public utilities are made use of. At military stations near cities quarters for officers should be rented and the officers given commutation, and the construction and upkeep of Government quarters avoided to as great an extent as possible. The present system involves many drains upon service, personnel, and resources not evident at first sight. Much more time should be given to the instruction of troops under arms. More of this work, especially of an intensive character, will put more vigor and interest into military life, and shorten the time needed for developing a well-instructed soldier. It will give an added interest to the daily work of the enlisted man and tend to prevent desertion. If soldiers are to be impressed with the seriousness of their profession they must live in an atmosphere which indicates keen interest and intense application on the part of their superiors.

ORGANIZED MILITIA.

GENERAL REMARKS.

The strength of the Organized Militia computed from organization records submitted by Federal inspectors at the time of the last annual inspection, made January 1–May 31, 1913, in accordance with the provisions of section 14 of the militia law, was 9,110 officers and 111,662 enlisted men, a net decrease of 32 officers and 1,048 enlisted men, as compared with the strength in 1912. This decrease has occurred, in many instances, from the elimination in compliance with law, of organizations and personnel found to have fallen irremediably below the very moderate standard of the War Department.

INSTRUCTION.

During the year there has been improvement in both the theoretical and practical instruction in the Organized Militia. This is believed to be due, first, to increased interest on the part of the Militia, and, in part, to the establishment in the several States of systematic and progressive courses of instruction formulated and supervised by regular officers detailed as inspector-instructors under the provisions of the act of Congress approved March 3, 1911.

PRACTICAL INSTRUCTION.

Officers' camps of instruction have been held in many States, and the results obtained confirm the statement which has been made before, that they are one of the most valuable practical means of supplementing the theoretical course that have been devised. In a number of instances, under special authority of the Secretary of War, selected enlisted men have pursued special courses of study.

State camps of instruction have been held by most States, except for certain organizations of Cavalry and Field Artillery, which participated with Regular troops in joint camps for these arms. The field instruction has been under the provisions of section 14 of the militia law, as a rule the regiment being the largest tactical unit present.

In a few States there were divisional or brigade camps or maneuvers. It is thought that on alternate years at least more benefit is derived from regimental camps of instruction where the time is devoted to field ruction of the companies, battalions, and finally the regiment. It has been noted that the greatest tactical weakness developed in the Organized Militia is in troop leading, and this can best be taught when the time allotted is wholly used in training the units above mentioned.

Much attention has been given by a number of States, notably Massachusetts, New Jersey, New York, and Pennsylvania, to fire problems. These are most valuable as a means of illustrating the methods to be employed in fire control, discipline, and effect. They should be included as a part of the program at every camp for field instruction.

It is regretted that the important subject of target practice shows but little progress. Of the total enlisted personnel armed with the rifle, about 60 per cent failed to qualify, even in the lowest class of those completing the course, i. e., as third classmen, and of this 60 per cent fully one-half failed to participate at all. Inasmuch as rifle practice is recognized as being one of the most important elements in the training of the Infantry soldier, the significance of the above figures is apparent at a glance and gives occasion once more for the oft repeated military maxim, that the best trained troops for duty in the field are not those whose training has developed an exclusive minimum of expert rifle shots, but on the contrary those whose training has produced a maximum of average marksmen.

INSPECTOR-INSTRUCTORS.

The necessity for a greater number of inspector-instructors of the Organized Militia has become so pressing that it is believed if present conditions of the service, which appear to render it impossible to secure further details of officers for the purpose, are to continue, legislation should be secured providing for an increase of officers to the Army sufficient to fulfill the demands of the States for these inspector-instructors.

Reverting to the legislation of March 3, 1911, which provided for an increase of 200 officers to the Regular Army, it will be remembered that one of the principal reasons assigned for the necessity of such increase was the demand of the Organized Militia for the detail of Regular officers for their instruction. The number of increased officers originally asked for in the report from the Committee on Military Affairs accompanying Senate bill No. 9331, was 612. And in the final appropriation act granting an increase of 200 officers, the President is authorized to detach inspector-instructors not to exceed one for each regiment and separate battalion of Infantry and an equivalent number for the other branches of the service.

If the above provision were carried out, the detail of 187 officers would be necessary, but at present there are 78 officers on this detail.

The policy of the War Department has been clearly stated to carry into execution, so far as practicable, the law on this subject, but an attempt to do this has resulted in failure, as the requisite number of officers are not available.

The demand for these inspector-instructors is incessant and general, and the Militia Division finds it unable to comply. Much unfavorable comment has been indulged in by the Organized Militia on the failure of the War Department to supply them with the number of these inspector-instructors contemplated by the law, and remedial action should be taken if possible.

SERGEANT-INSTRUCTORS.

The services of the sergeant-instructors during the past year, as heretofore, have been rendered in a most efficient and satisfactory manner. This is evidenced by the increased demand for the detail of sergeant-instructors and many requests for re-detail of those now on duty with the State troops. The increased demand resulted in an increase of the number available for duty with line and auxiliary troops.

INFANTRY.

The Infantry returns of the Organized Militia of the several States show a strength of 6,234 officers and 88,225 men, a total of 94,459. During the year there has been a gain of 18 officers and a loss of 3,402 enlisted men.

In many States there is an attempt to maintain too many Infantry organizations, considering the strength of the enlisted personnel, with the result that it has been impossible in many cases to keep companies at the prescribed minimum strength of 58 men. If this prescribed minimum strength were maintained, the Infantry of the Organized Militia would consist of 101,016 enlisted men, instead of, as at present, 88,225. It is, therefore, evident that this failure to comply with the regulations results in a loss of 12,791 effective Infantry upon which the Federal Government counts, should the Organized Militia be called out for national use.

The necessity of maintaining companies at the strength (58 men) which has been prescribed as the least possible for effective training and to serve as a nucleus for war-strength companies, will be realized when it is stated that the 12,791 men constitute about the Infantry strength prescribed by Field Service Regulations for one division, and 16,500 at full statutory strength.

The efficiency of the Infantry as regards instruction, organization, and equipment, while showing progress during the past year, can not be said to be such as would warrant the Federal Government in counting on its immediate availability as a whole for war purposes. Much remains to be done in way of training, organization, and equipment. Its efficiency varies widely; in a few States it has reached a standard where a very short period would suffice to make it available for field purposes; in others such use can not be considered for a period to be measured in months.

Recent orders promulgated by the War Department through the Division of Military Affairs have pointed out measures for the correction of the foregoing, and it is hoped that the subject will receive the serious consideration of the State authorities.

FIELD ARTILLERY.

How to provide an adequate and efficient Field Artillery continues to be a most vexed problem. It is so, due to the great cost of maintenance compared to the other arms and to the constant opposition on the part of individual States to spending so much money for what they regard as purely Federal purposes. All other arms are better adapted to State police purposes, and hence the State authorities look upon their creation and maintenance with greater favor than in the case of Field Artillery. While this view is not without some justification, yet it is far from being entirely correct. It fails to take into account the dual relationship of the Organized Militia to the State and to the Nation. Each of these Governments has the right to the services of this force. Each contributes toward its support, and each is, therefore, entitled to voice its desires, particularly as to the arm of the service to be maintained; but as the Federal Government is without power to force its desires in this respect on the States, the natural result is an entirely inadequate provision for the Field Artillery. Small forces, such as each State needs to maintain, have little need of Field Artillery; large forces, such as are obtained by combining the Organized Militia of all the States to serve a Federal purpose, must have it. Efforts are being made to induce the States to take a broad view of the situation, and to realize that the Federal Government does not contribute its financial aid to the Organized Militia for the purpose of enabling each State to maintain a State police force but does contribute for the purpose of obtaining a force for national defense. In such a force much more Field Artillery is necessary than now exists. Not only should each of the 12 divisions of the Organized Militia, elsewhere spoken of, have its full complement of this arm but there should also be in existence the heavy Field Artillery units necessary for the field armies that will be created by combining these divisions.

While there has been only a small growth during the year in the number of batteries maintained, there has been considerable growth in efficiency. More officers than ever before attended officers' camps of instruction. Target practice was more generally held and 20 officers graduated from the School of Fire.

A target range of about 25,000 acres was leased for the summer in the northeastern part of Pennsylvania and a joint Field Artillery camp of Regular and seven batteries of Organized Militia was held, and excellent progress made. There are now 63 batteries, including those being created in the Organized Militia, and for the first time by the creation of two regiments in New York and one in Minnesota, the Organized Militia of this arm has been extended to above a battalion. Nearly one-third of these batteries are in New England and New York. The remainder of the country is far behind in the quota of this arm. Since the Infantry is the arm that is especially interested in maintaining an adequate and efficient Field Artillery in case the Organized Militia is used for national defense, attempts are being made to interest the Infantry in the development of the Field Artillery. The Infantry is more dependent for its success than ever before on its Field Artillery. It is regarded as necessary to ultimately modify existing Federal laws relating to Federal allotments to the militia, so as to extend special aid to the Field Artillery. In no other way, in my opinion, can this arm be developed to the extent that is necessary to make an efficient fighting force of the entire Organized Militia.

CAVALRY.

Men in the Cavalry of the Organized Militia, like their confreres of the foot service, are paid and subsisted only when on duty. But mounts must be subsisted and cared for the year round if they are to be available and in a proper state of training when called upon for military service. In other words, although militia troopers under ordinary peace conditions can be maintained at a fraction of the cost of regular troopers, suitable militia mounts must cost approximately the same as those used in the permanent establishment. It results from these conditions that it costs very much more to maintain a militia cavalry organization of given strength and efficiency than an infantry one of equal strength and efficiency, and that the cost of Cavalry as compared with that of Infantry in the militia is far greater than the relative cost of these arms in the regular service.

Considering the heavy cost of mounted militia cavalry and its restricted usefulness for purely State purposes, it seems quite evident that the States, if they consulted only their own interests, would prefer to maintain their militia infantry in predominating proportions. Even taking into account the very laudable desire of the States to help out the Federal Government in its effort to encourage the maintenance, for Federal purposes, of a properly balanced force of all arms, it would be natural to expect the States to begrudge the expenditure of large sums of money on the cavalry arm. And such is indeed the case. It would seem then that to protect its own interests, the Federal Government should not leave it to the States to decide on the apportionment of Federal funds between the several arms, but must itself undertake this distribution.

In thus regulating the distribution of funds, the Federal Government should have these two ends in view:

(*a*) The proportion of the several arms should be tactically correct.

(*b*) The several arms should be maintained in a uniform degree of efficiency.

Legislation will be necessary to place the Cavalry of the Organized Militia in a satisfactory condition as regards strength and training. Such legislation should provide for the maintenance of a limited number of horses pertaining to the Organized Militia and the expense of such maintenance should be met out of funds appropriated under section 1661, Revised Statutes.

Under the present law a number of organizations own horses, some even having enough to mount the entire command at one time. A majority of the militia cavalry organizations either own but very few horses or none at all. The result is that when required to turn out they have to gather such available mounts as can be found in the vicinity, many of them wholly unfit for service and of a type unsuited for military work. The results are not satisfactory.

A number of militia cavalry organizations had but little or no mounted work during the year. In one case a squadron went into camp for 10 days without a single horse. Such troops are cavalry in name only and their being carried as cavalry in the reports gives an erroneous impression of the strength of the cavalry arm.

ENGINEERS.

There are now in the Organized Militia of the several States 2 bands, 4 battalion headquarters, and 21 pioneer companies, the same as at date of last report. Including a number of engineer officers in States which have no troops, but excluding the Oklahoma company since mustered out, the strength of the engineers according to annual returns of December 31, 1912, was 121 officers and 1,122 enlisted men. One company was mustered out in Oklahoma May 13, 1913, and 1 new company was mustered in at Chicago, Ill., July 30, 1912.

The present distribution, according to the proposed 12 tactical divisions, is unbalanced, 7 out of the 12 divisions having no Engineer troops, and of the 5 which have any engineers, 2 have only 1 company each, and 1 has but 2 companies. On the other hand, the Sixth Division (New York) has a surplus of 9 companies and the Eleventh Division (Ohio and Michigan) a surplus of 2 companies.

During the year two officers of the Corps of Engineers of the Army were detailed for duty with the Organized Militia, one in the Division of Militia Affairs, and one as inspector-instructor of the Engineer troops in the States of New York, Pennsylvania, and Ohio.

It is believed that during the coming year the complement of engineers in the Organized Militia will be increased by approximately 10 companies.

All of the companies organized have practically complete technical outfits for militia pioneers. The New York Engineers have one complete division of advance guard, ponton equipage, some reserve ponton equipage, and a lithographic outfit.

Considering the engineer organizations required for the 12 proposed divisions of militia, the deficiency is 15 pioneer companies and 8 battalion headquarters. To these numbers should be added the 4 ponton battalions for the auxiliary divisions of the probable 4 field armies and 4 battalions railway troops and at least 4 battalions as line of communication and depot troops. The total deficiency in engineers required for operation of the 12 proposed militia divisions is therefore 20 battalion headquarters and 51 companies.

SIGNAL TROOPS.

Field Service Regulations of 1910 prescribe for each division one battalion of signal troops composed of 2 field companies. The present scheme contemplates 12 Militia divisions. In order, then, that the Militia Signal Corps organizations be in the correct proportion there should be 24 companies, or 2 to each division. These companies should also be the same as the field companies of Signal Corps troops of the Regular Army.

Four types of field companies are authorized for the Organized Militia:

Type A, containing 4 wire sections and 2 radio sections; type B, containing 4 wire sections; type C, containing 2 wire sections; type D, containing 2 wire sections and 2 radio sections.

Type A is the same as a Regular Army field company. There are at present in the Organized Militia 11 type A companies, 3 type B companies, 3 type C companies, 5 type D companies. Total, 22 companies.

One-half of the above are of the Regular Army type, and 2 companies are lacking to make the number necessary to conform to the required proportion for the 12 divisions.

These 22 companies are not properly distributed in the several divisions, three divisions having none, and several having more than the required number. An effort will be made to recruit all companies to the A type and to organize the 2 now lacking.

SANITARY TROOPS.

While there has been considerable improvement in the efficiency of the sanitary troops of the Organized Militia during the past year, this improvement has not been as great or as general as is desired, and as is essential to real efficiency. The principal causes of the present unsatisfactory condition are lack of uniform organization and instruction, of proper equipment and suitable instructors, and in some instances a lack of proper support and encouragement on the part of the State authorities, and to some extent inefficient personnel in the medical department itself of the Organized Militia.

COAST ARTILLERY.

The War Department provides a uniform system of instruction for the Coast Artillery Militia, which applies to the indoor or armory period of instruction as well as to the exercises held each year in the several coast defenses. The value of a definite standard method of instruction has been demonstrated by the steady and commendable progress made by the troops in acquiring knowledge of their matériel and duties, and by their ability to serve their guns with safety and fire with a fair degree of accuracy.

The development of Militia Coast Artillery is most important, serving as it will to fill up the complement of men necessary in the coast defenses in case of war. Under a proper system and with officers interested in their work, instruction is possible throughout the year, either in armories or in the batteries themselves, generally within reach.

This branch of the Militia has a far better opportunity than other arms of the Militia to become highly efficient, and every effort should be made to make it so. To this end every opportunity should be made use of to take the men to the fortifications for practical work, and arrangement should be made looking to this by those of the regular establishment, and the Militia assigned to their works for instruction.

RESERVES.

The subject of reserves is one of great national importance. Militia organizations are maintained during peace at the minimum strength consistent with training. When war comes it will be necessary to increase these organizations nearly to three times the peace strength. Unless some system is adopted through which trained men can be assured, such increase must come from the untrained civilians constituting the mass of the population; and it is evident that organizations increased in this manner would be rendered ineffective for immediate use.

In view of these facts, there should be organized in each State a militia-reserve system to consist of men who have served for a period in the Army, Navy, Marine Corps, or Organized Militia. It is believed that any legislation enacted in connection with the Organized Militia should contain some provision on the subject of reserves. As such reservists are needed principally for Federal use, the small cost of maintaining them should be paid almost exclusively by the Federal Government. There are many men who for one cause or another are compelled to sever their relations with the Organized Militia but who would gladly enroll in a reserve for national purposes. Legislation creating such a reserve for national defense, but exempting the members from liability to strike or riot duty, would, I believe, be very popular with ex-guardsmen generally.

UNITED STATES PROPERTY ISSUED TO THE ORGANIZED MILITIA.

Military stores and supplies purchased by the United States and issued to the Organized Militia are not, in some instances, properly cared for or adequately protected against theft and damage from avoidable causes. The conditions, however, have improved during the past year to a greater extent, it is believed, than in any prior period of like duration. The improvement has resulted from active and persistent efforts of the War Department, commenced in 1911, to induce the authorities of the Organized Militia to account or pay for property shortage and to provide proper facilities for the care and protection of the supplies on hand.

The total value of property shortages in 19 of the States and the District of Columbia, determined to date and acknowledged in most cases by the Militia, amounts to over $800,000. When the inventories of the property in the remaining States shall have been compiled and compared with the property returns, the total value of stores which have been lost and which can not be satisfactorily accounted for will be far in excess of the amount just stated. A portion of this shortgage accrued before or about the time of the Spanish-American war, but the greater part has accumulated since the enactment of the Dick law in 1903.

The value of property lost or destroyed through failure to exercise proper care, and charged during the fiscal year 1913 to the allotments to the several States under section 1661, Revised Statutes, was $29,633.19. This amount is the value of only the stores reported by the States in survey proceedings and does not by any means include all such losses.

The Organized Militia is not supplied with uniforms and equipment in quantity or kind sufficient for its needs should all or a large part thereof be called into the service of the United States. There seems to be a tendency in some of the States to provide only the supplies needed by the troops for the short period of the annual field exercises. Other States look to the equipment of their troops for State purposes only. The rights of the Federal Government in this particular appear to have been lost sight of by some States. The most serious deficiencies are lack of shoes, stockings, service uniforms, transportation, and equipment for sanitary troops. The lack of equipment is in a measure also due to the fact that large quantities of property have been lost or rendered unserviceable through neglect or carelessness. The comparatively large expenditure of funds for the pay and transportation of officers of high grade without commands or duties commensurate with their rank and the great expense connected with the participation of small selected rifle teams in State, interstate, and national competition have contributed in no small degree to the want of proper equipment. The War Department is inaugurating a system of rigid scrutiny and supervision of all expenditures of Federal funds for the benefit of the Militia with the view to correcting the defects referred to.

TACTICAL DIVISIONS.

In my last report it was stated that it was proposed to divide the territory of the United States into divisional districts, each district to contain a tactical division in so far as infantry is concerned. This work has been completed during the year, 12 divisional districts having been organized. Of these 12, 2 districts comprise a single State each, New York forming the Sixth Division and Pennsylvania the Seventh Division. In all other cases the cooperation of the governors of the different States has been secured, but the problem of creating organizations of the necessary auxiliary troops, of coordinating the instruction within a district so as to secure the same relative field efficiency in the troops of each State composing the divisional district, or providing a similar amount of clothing, supplies, etc., for component units of the division, plans for mobilization within a divisional district, methods of supply, divisional encampments, etc., have received but little consideration. These are but a few of the many questions that must be considered and worked out in detail before real life can be breathed into the divisional plan, and until such time these divisions, with one exception, will continue to be little more than paper organizations. In so far as the two States, New York and Pennsylvania, each forming a divisional district in itself, are concerned, the former has made rapid progress during the year toward completing its division, particularly in the matter of Field Artillery. It is now the only division that has its full complement of 12 batteries. It has also increased its other auxiliary troops, has coordinated the work of the different components of the division, is working on the question of reserve supplies, mobilization, etc., until now a complete division, at the present rate of progress, may shortly be expected, together with practical plans for smoothly passing into the Federal service in case the need therefor should arise. In Pennsylvania, as far as is known, but little has been done, and the shortage of auxiliary troops is so great as to leave much to be accomplished before that State will possess a division in fact.

ORGANIZATION.

Intimately connected with the organization of divisions is the question of correct organization of the components thereof. Companies, battalions, regiments, and brigades must be correctly organized before the division of which they are a part can be correctly organized. Some years ago there was a heterogeneous organization generally throughout the Organized Militia, scarcely two States being alike. Accordingly, in 1903 Congress passed an act requiring the Organized Militia to conform to the organization of the Regular Army within five years in order to participate in Federal appropriations. This period was subsequently extended to January 21, 1910. The task was a large one, but it was substantially accomplished up to include regiments by 1910. As the law is not clear as to whether the staff officers conducting the administration of the State, both in peace and war, and not necessary to tactical units in the field, form a part of the Organized Militia, the status of all such staff officers continued to be a vexed question.

Pending the settlement of this question there either grew up or remained in the militia, as an inheritance from the old régime, an excessive number of staff officers with excessive rank. This question has now been settled by regarding each individual State as a territorial department within which are located certain tactical commands of troops, and providing for each of these States or departments a staff conforming to the policy of the War Department in like cases. The number and rank of these officers is based on the idea of providing an adequate staff to carry on in the State the necessary work of administration in both peace and war, and to furnish the staff officers necessary for commands taking the field. Again, while a regiment may have been complete with 12 companies at one time, yet changes continually occur and by mustering out one or more companies the regiment may have been reduced so that it no longer contained the number of companies required by law; yet the unit continued to be called a regiment and carried with it a field and staff, both commissioned and enlisted, appropriate to a regiment. The result of this is calling an organization a regiment when in fact it is only a part of a regiment; a battalion, when it is only a part of a battalion; a brigade, when only part of a brigade; and a division, when it is only a part of a division. In order, therefore, that the divisional district plans just spoken of might have some sort of a working basis, it became necessary to require that units from the smallest to the largest be properly organized and that they conform to the organization of the Army. At the same time it is realized that changes must continually occur in any organization of citizen soldiery whereby, say a company, is mustered out of a regiment, and as it is not desired that the regiment shall lose its existence due to such temporary absence of a company, a time limit regarded as eminently reasonable is given to a State within which it must replace the missing unit, failure to do so within the specified time resulting in the remainder of the regiment being organized into battalions and separate companies only. While it must be apparent that this insistence on correct organization is in the interest of increased efficiency and economy and is essential in any organization for national defense, yet the compelling cause that led this year to an elimination of superfluous officers and to the adoption of a correct organization of tactical units is a desire to require a better compliance with the evident intent of the law. In other words, while by 1910 the Organized Militia had adopted an organization substantially complying with that of the Regular Army up to include a regiment, yet in the respects that I have just stated there was far from compliance, and since 10 years have now elapsed since the States were first notified of the necessity of conforming to the law, it was thought that the Secretary of War would no longer be justified in overlooking minor details in carrying out what the law evidently contemplated. This intent is made plain from a reading of the law which says:

> On and after January 21, 1910, the organization, armament, and discipline of the Organized Militia in the several States and Territories and the District of Columbia shall be the same as that which is now or may hereafter be prescribed for the Regular Army of the United States, subject in time of peace to such general exceptions as may be authorized by the Secretary of War.

The courts decided:

> When one Congress has carried its power into effect, its laws for the organization, arming, and disciplining of the militia are the supreme law of the land; and all interfering State regulations must necessarily be suspended in their operations. (Houston v. Ward, 5 Wheat., 51.)

This law and decision read together plainly indicate that Congress had in mind requiring the Organized Militia to conform in its organization to that prescribed for the Regular Army, but that, as the different conditions under which the two forces serve might render necessary some minor changes, authority was granted to the Secretary of War to make general exceptions in time of peace to the organization of the Army. Also, that when the Secretary has made such general exceptions and announced them, the organization that he has then prescribed becomes mandatory upon the Organized Militia. Accordingly, it is anticipated that the correct organization of all tactical units recently announced to the Organized Militia by the Secretary of War will secure uniformity throughout the 50 little forces now existing; will be an important step toward obtaining increased efficiency, and with its adoption will meet with but little objection on the part of the individual States.

FEDERAL PAY FOR THE ORGANIZED MILITIA.

I am in favor of a moderate allowance of Federal pay for the Organized Militia, provided it is given as a result of proficiency in the requirements set by the Secretary of War, and provided that the militia receiving Federal pay be made surely and promptly available when required by the Federal Government, but not otherwise.

All who are familiar with the conditions under which the militia works know what difficulties it has to meet and overcome, how little encouragement it receives, how great the sacrifices in the way of holidays and evenings. They know also that there is a real spirit of patriotism which gives it its life and energy and that, as in all voluntary organizations, the energy and drive which keeps it going ahead come principally from a few officers and men in each unit who are the real workers, and that if we are going to require higher standards, which mean more time and more work, some additional inducement must be given to secure it and keep the organizations full.

UNITED STATES MILITARY ACADEMY.

Two examinations were held for admission to the academy during the past year; one, the regular spring examination, and one a special examination for the purpose of filling up, if possible, the existing vacancies. It is much to be regretted that this splendid institution is not kept full, and it is earnestly hoped that the measures presented to Congress to this end will be enacted into law. I refer especially to the measure which provides for the appointment of the first 30 successful alternates. If this is enacted into law it will enable us to keep the academy full. The graduates are needed in the service, and the institution can be worked to its full capacity with practically no increase in overhead charges. Even if the number of graduates should be in excess of the needs of the Army, they will be a valuable asset to the country in time of need.

It has been decided to amplify somewhat the procedure for admission to the Academy by admitting, subject to physical examination only, young men of suitable age and character who have passed without condition the entrance examination to the universities, colleges, and technical schools of that class whose entrance examinations equal the requirements of West Point. This will enable a great many young men who are preparing for college, who are anxious to go to West Point but are somewhat uncertain as to securing an appointment, to go on and make their preparation for college, knowing that if they are successful in passing the college examinations they can, if successful in the matter of securing an appointment, enter the Academy. Under the present system many young men who are fitting for college do not feel that they can afford to drop out and go to a preparatory school for the purpose of reviewing elementary work which had been done years before, thus interfering with their preparation for college and involving great additional expense, all perhaps with an uncertainty as to appointment. Under the modified system young men who are not preparing for college will go on and prepare for West Point as at present, but young men who are in college, and young men who are preparing for college and hope to go to West Point, can go on with their college work knowing that if they have passed successfully the examinations of the colleges of the first class and secure an appointment they can enter West Point subject only to physical examination. This is going to bring to the Academy, I believe, a most desirable class of men, certainly men with a far broader educational foundation than those who enter the Academy through the special preparatory schools, whose curriculum is generally limited and whose efforts are concentrated on the few studies necessary to pass the academic board. It seems desirable that a cadet should have had as broad an educational foundation as possible before going to West Point. This addition to the present system, while not interfering with those who prefer to follow the old method, will give us, I believe, a large number of young men who will go to the Academy better prepared to take up not only the academic work but the work and duties which fall to an officer after graduation, through having had a better all-around education before going to the Academy.

THE ARMY SERVICE SCHOOLS.

The work at the Army Service Schools has maintained its former high standard. I believe the schools are becoming more valuable every year. It is difficult for one who has not seen the effect of these schools upon the officers who have studied there to appreciate their tremendous value to the service. They are teaching a sound doctrine and our officers are commencing to speak a common language in a military sense and to understand better the interdependence of the different arms. An efficient Army is now the objective, and the proper proportion of the various arms striven for instead of the disproportionate development of any one arm.

The garrison school course needs thorough revision and grading for officers of different qualifications. This is now being done.

SHORTAGE OF OFFICERS.

There exists at the present time a great shortage of officers and the War Department is unable to meet the demands made upon it by the militia, and it is only with the greatest difficulty that suitable officers are secured for duty at the various colleges and schools where military instruction is given under officers of the Army.

To-day we could make use of to great advantage 100 additional officers with the militia. As the militia is now a part of the first line and one of our main dependencies in case of war, steps should be taken to provide, with the least practicable delay, a sufficient number of officers to meet its requirements.

The trained officer is one of the most valuable military assets this country can have, dependent as it is upon hastily raised forces, and it is a false economy to reduce expenses by reducing the number of such officers.

THE ADJUTANT GENERAL'S DEPARTMENT.

The administration of this department during the past year has been efficient and there has been a spirit of helpful cooperation which has tended to facilitate and expedite the conduct of public business.

I am of the opinion that all records pertaining to the strictly military side of the War Department should be considered as forming one central stack, and be under the charge of The Adjutant General. It is not necessary that these records be all in the same section of the building or on the same floor, but they should be under one control, and that should be The Adjutant General, and all correspondence pertaining to the military establishment should come in and go out through his office, in order that the records may be complete. At present there is much duplication of records, which is quite unnecessary and involves very considerable needless expense. The Adjutant General's office is the office of record, and should be made so. No sound argument has as yet been presented against this being done. The reasons advanced are trivial and, in my opinion, unworthy of serious consideration. As it is now, the records in the hands of The Adjutant General are not only in different parts of the War Department building, but in other buildings outside, so that the physical difficulty of obtaining a record will not be in any way increased. At present, when records are wanted by the Secretary of War, Chief of Staff, or other officer, they are procured through The Adjutant General, who frequently has to obtain them from the different bureau chiefs.

RECRUITING SERVICE.

ENLISTMENTS.

The following is a comparative statement showing the enlistments, including reenlistments, from November, 1911, to October, 1912, inclusive, and from November, 1912, to October, 1913, inclusive:

Date.	Enlistments.	Reenlistments.
November, 1911	3,814	1,632
December, 1911	3,966	2,146
January, 1912	4,236	2,591
February, 1912	3,519	2,344
March, 1912	3,102	2,268
April, 1912	1,965	1,788
May, 1912	2,359	1,852
June, 1912	2,139	1,830
July, 1912	2,075	2,264
August, 1912	2,291	2,677
September, 1912	2,014	2,625
October, 1912	2,220	2,931
Total	33,700	26,948

An examination of these two columns shows that the enlistments during the past year have fallen off 20.1 per cent as compared with the previous year. The falling off in the number of recruits up to July, 1913, was due in part to the new enlistment period, loss of certain allowances, and general conditions surrounding the new enlistment. Other causes were also undoubtedly operative.

I am of the opinion that the permanent personnel, commissioned and enlisted, now at the recruit depots, is larger than necessary; that the force at the larger depots should be one battalion, with the necessary staff, commissioned and noncommissioned personnel; that the total period spent by the recruit should not exceed 35 days, unless extended on account of sickness or accident resulting in temporary disability; and that all general prisoners should be sent to other stations. The presence of large numbers of general prisoners at recruit depots is most undesirable.

The situation as to the recruit and casual stations in San Francisco Harbor is unsatisfactory. At Angel Island the old post is now used as a recruit station, and at a short distance a large and expensive casual station has been built at a point without adequate water supply or proper ground for instruction. Water has to be sent to this station by boat, and its upkeep is very expensive. Ample space existed on the main land at either the Presidio or Fort Mason, where maintenance would have been easy and through the same general machinery as that of the post. It is believed that this new casual station should be transferred to the Public Health or Immigration Service, and casuals handled at Fort Mason, at which point they embark and land. The present system in force at San Francisco is administratively thoroughly unsound and involves great and unnecessary expense to the Government, as shown in a recent study made under the supervision of the commanding general of the western department.

JUDGE ADVOCATE GENERAL'S DEPARTMENT.

There is pending before Congress a revision of the Articles of War. The necessity for this revision continues to be urgent.

In his report of last year the Judge Advocate General called attention to a "proposed detention system" which was then under consideration, the object of which was the reformation of purely military offenders, and their return to the service as useful soldiers. Section 2 of the bill to revise the Articles of War sets forth the changes necessary in the existing law fully to inaugurate this system. Failing to secure the enactment of this legislation, the department has proceeded during the current year to establish the system in so far as it could without the aid of legislation, issuing to that end General Orders, No. 56, current series.

In pursuance of a requirement of this order, there have been organized at the military prison at Fort Leavenworth two disciplinary companies, and at Fort Jay one such company. It is hoped that before the end of the calendar year we shall have a complete disciplinary battalion at Fort Leavenworth, and before the end of the fiscal year a disciplinary regiment. Membership in these disciplinary organizations is limited to good-conduct men. Upon admission thereto they are allowed to discard prison clothing in favor of a neat fatigue uniform, which has been provided out of obsolete clothing supplies for the use of the Regular Army. The hours of hard labor of members of these disciplinary companies have been so reduced as to give approximately over one-half of each day to military instruction.

General Orders, No. 56, inaugurated another important change in the requirement that soldiers convicted of felonies alone or in connection with military offenses should be sent to Federal penitentiaries for the execution of their sentences of imprisonment. This will rid us of the felon class of our prison population, leaving us only prisoners convicted of military offenses alone or in connection with misdemeanors, and will clear the way for effective military instruction with a view to restoration to duty with the colors.

The general policy of the department may be summed up in a simple statement that we are trying to give the men who have gone wrong a chance to make good and to leave the service with an honorable discharge and to get away from the old system which had in view only punishment, with, so far as one could see, little or no thought of reformation. The keynote of the present method is reform through intelligent control and discipline, and reasonable opportunity. I believe that the result will be that most men who have gone wrong will be saved to the service, and that there will be a better feeling toward the Army and ultimately a much smaller number of men in civil life who have left the service with a dishonorable discharge and have become more or less enemies of society.

ACT OF AUGUST 22, 1912.

This act carried the provision that the provisions of section 1118, Revised Statutes, that no deserter from the military service of the United States shall be enlisted or mustered into the military service, and the provisions of section 2 of the act of Congress approved August 1, 1894, which provided that no soldier shall be again enlisted in the Army whose service during the last preceding term of enlistment has not been honest and faithful, shall not be construed to preclude the reenlistment or muster into the Army of any person who has deserted or may hereafter desert from the military service of the United States in time of peace, or of any soldier whose service during his last preceding enlistment has not been honest and faithful, whenever the reenlistment or muster into the military service of such person or soldier shall, in view of the good conduct of such person or soldier subsequent to such desertion or service, be authorized by the Secretary of War. This act is a long step in the right direction, in that it enables the Secretary of War to extend to such men as he considers worthy an opportunity to serve honorably and gain an honorable discharge.

Number of trials by general courts-martial.

Commissioned officers		33
Convictions approved	25	
Convictions disapproved	1	
Acquittals approved	2	
Acquittals wholly disapproved	4	
Awaiting action of War Department	1	
Cadets		7
Convictions approved	5	
Convictions wholly disapproved	1	
Acquittals approved	1	

Enlisted men		5,121
Convictions approved	4,755	
Convictions wholly disapproved	70	
Acquittals approved	271	
Acquittals wholly disapproved	25	
General prisoners		48
Convictions approved	46	
Convictions wholly disapproved	1	
Acquittals approved	1	
Total		5,209

The number of trials of enlisted men by general courts-martial was 6 per cent of the average enlisted strength of the Army in 1907, 6.2 per cent in 1908, 7.4 per cent in 1909, 6.98 per cent in 1910, 5 per cent in 1911, 5.2 per cent in 1912, and 5.8 per cent in 1913.

DESERTION.

It is difficult to account for the fluctuation from year to year in the volume of desertions. The causes influencing it are not always apparent. During the past year the expectation of performing active service probably influenced many young men to enlist. Failure to secure such service resulted in discontent and attendant desertion. Desertion under ordinary conditions is dependent largely upon the relations which exist between officers and their men. Officers who take an intelligent and sympathetic interest in the everyday lives of the men under them have few desertions from their commands. In my opinion, it is the absence of this sympathetic, human interest and the lack of knowledge in handling men that are responsible for the bulk of the desertions occurring in our Army. Officers who strive by all practicable means to maintain the self-respect of the men under their command, to build up their appreciation of and respect for the service, and, at the same time, to look after their interests and help them in their troubles, are those who have few desertions.

The following is the percentage of desertions from 1903 to 1913, inclusive:

1903	7.10
1904	6.61
1905	6.79
1906	7.43
1907	5.62
1908	4.59
1909	4.97
1910	3.66
1911	2.28
1912	3.00
1913	4.15

It is believed that a form of enlistment, under which men can earn their discharge from the service through efficiency at any time after a year, would tend to diminish desertion. It is also believed that the new system of handling military offenders will tend to reduce desertion.

INSPECTOR GENERAL'S DEPARTMENT.

The work of the Inspector General's Department has been, as a whole, satisfactorily performed.

The Inspector General submits a report containing a number of excellent recommendations. He states that the discipline of the Army appears to be satisfactory; that the tactical inspections are of increasing value and tend greatly to improve the efficiency of the troops. I believe these inspections are the most important ones we have and should be carried out with the greatest care, and that they should include problems of sufficient scope to test thoroughly officers of the different grades.

The Inspector General invites attention to the necessity for greater uniformity in the field ration, and recommends that a designated ration be prescribed for field issue in time of peace.

Attention is invited to the fact that instruction in bayonet fencing is still deficient. The attention of officers has been repeatedly called to it, and there is no excuse for failure to attain greater proficiency, as wherever the spirit has existed to attain the ends desired by the War Department means have been found to accomplish it.

Attention is invited to the mixed condition of uniform in some parts of the service. This has been incident to the desire to use up the remaining portion of the old khaki uniform. This situation is rapidly terminating, and we shall soon have a uniform type of clothing and shoes.

Attention is further invited by the Inspector General to the necessity for establishing the semaphore system of signaling. I believe this is sound and should be carried out.

The Inspector General states that a consistent effort is being made to reduce paper work, and that this type of work at most posts is being kept down in accordance with the instructions of the War Department, and that post commanders are transacting as much of their business as can be so transacted through personal interviews and brief memoranda rather than by letters.

Attention is also invited to the care which is being given by Infantry officers to the condition of the feet of their men, and that as a result thereof there has been great improvement in this respect, resulting in better marching capacity of the troops.

QUARTERMASTER CORPS.

The consolidation of the Quartermaster, Subsistence, and Pay Departments has been made and is in successful operation. I believe the consolidation has been in the best interests of the service, and that it will tend to a more economical and efficient administration of such Army matters as fall within its scope. I am of the opinion that this department, charged as it now is with transporting, paying, feeding, and clothing the Army, should be relieved of all work incident to the construction of barracks and quarters and other construction pertaining to the military establishment, roads, walks, sewers, water systems, piers, etc., and that all work of this character should be transferred to the Engineer Department. I do not think the advisability of this transfer can be open to serious question, when it is remembered that in transferring this work to the Engineer Corps we are transferring to it work for which it has been specially trained, and work which it does for other departments of the Government. The present procedure is not, I believe, to the best interests of the Government either from an administrative standpoint or one of economy.

It is believed that the Ordnance Department should manufacture, to as great an extent as possible, all supplies required by the Quartermaster Corps which are of a type which the Ordnance Department could make.

Auto trucks and other motor vehicles are gradually being introduced into the service. I believe that their use should be extended and that such extension will be in the direction of economy, especially at posts and stations where there are good roads. They can not in this country for many years replace the horse and mule for field transportation, except to a limited extent.

The character of the subsistence supplies furnished has been satisfactory.

The question of an emergency ration has again been under consideration, the present emergency ration having produced digestive disturbances when used for several consecutive days.

The question of the payment of troops has been much simplified through the merging of the Pay Department into the new corps.

The policy of establishing supply depots has been continued, and moderate additions to supplies have been made. It is believed that in each territorial department there should be supplies sufficient to equip both the regular and militia organizations stationed therein when brought to full statutory strength.

There is a considerable shortage of horses at present in the Cavalry and Field Artillery. Steps will be taken to correct this deficiency as soon as funds are made available from the pending appropriation. The remount stations are giving good results, and a distinct improvement has been made in the class of animals for the Cavalry, but if we are to secure the best results from an economical standpoint, a larger number of horses should be kept at the various stations.

PACK TRANSPORTATION.

The art of packing is gradually passing out of the Army. We have at the present time very few pack trains and very few of the old experienced packers. This is a department of transportation to which I believe especial attention should be paid, as for many years to come it will be one of the principal means of transporting supplies in the sparsely settled sections of our country and along our land frontiers.

MEDICAL DEPARTMENT.

The health of the Army during 1912 was very satisfactory. There has been a material reduction in both the noneffective and admission rates. These rates for 1912 for diseases were the lowest on record in the history of the Army. The indications are, at the present time, that there will be still further reductions in them for the year 1913. This improvement, which has been in progress since the Spanish-American War, has been due to constantly improving sanitary conditions. It has, however, been especially marked, since the campaign was inaugurated against typhoid fever and venereal diseases.

Typhoid fever has practically ceased to be a disease worthy of consideration as far as noneffectiveness in the Army is concerned. The results achieved by the compulsory inoculation of the Army with the typhoid prophylactic have been far better than its most ardent advocate ever hoped for. The number of cases and deaths occurring in 1912 were by far the lowest on record in the Army. As brilliant as are the results in 1912, those for 1913 will be much more marked. At the present date only one case has been reported in the entire Army, American and native troops, at home and abroad.

This case was in a recruit of only five days' service who had not, at the time of his admission to the hospital, received the first dose of the typhoid prophylactic. One other case has been reported in a recently discharged soldier who had been immunized.

With regard to typhoid fever, calculating upon the admission rates in the Army in the United States, the percentage of cases for 1908, the year before inoculation was begun, was 2.94, which, statistics show, was the lowest rate in the history of the Army for this disease. For 1912 the rate was 0.26, and for the first 10 months in 1913, 0.016. For the first 10 months of the present year only one case of typhoid fever has occurred in the entire Army, and this was the case of a man who developed symptoms of the disease five days after enlistment.

The remarkable results which have been obtained in the elimination of typhoid fever from the Army are among the most notable achievements in modern times along the lines of preventive medicines, and this is responsible for removing from the Army one of the great sources of disability and loss. (Appendix 9.)

The present system of camp sanitation has proved very satisfactory. This system was first tried out on a large scale in the camp for the maneuver division at San Antonio, Tex., in 1911. Since the early part of this year troops have been in camp at Texas City, Tex., Galveston, Tex., and in small detachments at other points along the Texas border. The health conditions in these camps have been most excellent. It is being demonstrated, day by day, that with the present inexpensive method of camp sanitation troops can live in camps when properly protected against smallpox and typhoid fever by preventive inoculation for an indefinite length of time without any iill result.

Venereal disease in the United States: Cases per 1,000 in 1911 was 145.29. Cases per 1,000 in (first six months) 1913 was 74.67. (Both figures to annual rate.)

Venereal disease, entire American Army: Cases per 1,000 in 1910 was 154.91; noneffective rate, 11.51.

Cases per 1,000 in 1912 was 136.70; noneffective rate, 7.78.

The noneffective rate for disease, entire American Army, was for 1910, 30.52 per 1,000, and for 1912 was 25.43 per 1,000.

Following the action of the War Department, prescribing a system of compulsory venereal prophylactic and semimonthly physical examinations of all enlisted men, and the action of Congress for the stoppage of pay of all officers and enlisted men while excused from duty on account of sickness from alcoholism, drug addiction, and other misconduct (venereal diseases, etc.), the campaign started by the Office of the Surgeon General several years ago, now seems destined to be successful. The figures for venereal diseases for 1912 were very satisfactory, and the compilation of the statistics in the Office of the Surgeon General for the first six months of 1913 shows that the annual rate for this period for the United States was lower than that for any year since 1895. This rate was only about half that for these diseases for 1911, the year before action was taken by the War Department and Congress.

There has been a steady reduction in the percentage of discharges for disability, due in part to better sanitary conditions at home and abroad, and other causes, reducing the noneffective rate.

CORPS OF ENGINEERS.

The officers and men of this corps have maintained the traditions of the corps for efficiency.

The number of engineer organizations at present authorized is insufficient to provide the proper complement of engineer troops for foreign service and for the tactical organization of the mobile army within the continental limits of the United States; moreover, the increased demands on engineer troops in the past few years have made it necessary to maintain the several companies at nearly the maximum strength authorized by law.

Two additional battalions should be provided, of which one battalion should be mounted, so as to provide the cavalry division with its proper complement of engineer troops.

I earnestly recommend as being for the best interests, not only of the military service but of the Government, that all construction work of a permanent character, including barracks and quarters and other buildings needed in the military service, roads, walks, sewers, water systems, piers, etc., in fact all engineering work and construction work, such as is done ordinarily by engineer officers for other branches of the Government, be transferred to the Corps of Engineers. The officers of this corps are specially trained in the discharge of duties of this class, and it seems most unwise not to make a larger use of them in construction work pertaining to the Army. We are constantly confronted with situations where engineer officers of experience are engaged on construction work on fortifications, with their necessary buildings and appliances, at practically the same point where construction work is being done by the Quartermaster Corps under the immediate direction of officers who, whatever their qualifications as soldiers may be, have not been educated or sufficiently trained in the technical details of construction work, and who, because of the lack of such training, are dependent to an undesirable extent, in all matters relating to technical details, upon their civilian assistants.

ORDNANCE DEPARTMENT.

The Ordnance Department is continuing the satisfactory accumulation of a supply of small arms, small-arms ammunition, and personal equipments, including the new Infantry equipment, model of 1910. Fourteen regiments of Infantry have been supplied with the new equipment. The new model Cavalry equipment has been approved and its manufacture ordered. The automatic pistol, caliber .45, has been issued to all Regular troops previously armed with the revolver, with the exception of the Cavalry, which will receive it in the immediate future. Partial issues have been made to the Organized Militia. The service rifle and ammunition have maintained their superiority as shown in several national and international contests. A new type of saber has been adopted, which it is believed is a great improvement on the present type. It is greatly superior as a thrusting weapon, and has at the same time excellent cutting qualities.

The seacoast defenses of the United States are in a fairly satisfactory state with the exception of the supply of ammunition for mortars and rapid-fire guns, which is not nearly as large as it should be and is not being accumulated as rapidly as it should.

The most serious shortage of material for preparation for war is that of Field Artillery. Approximately 50 per cent of the guns and carriages and the corresponding equipment pertaining thereto, required for the moderate sized army which it will be necessary to equip at the outbreak of war, remain to be provided. No ammunition trains for Field Artillery have been provided. Estimates for a small number of such batteries have been included in the estimates submitted by the department for the next fiscal year. Of the ammunition for Field Artillery required for the first army mentioned above approximately 85 per cent remains to be provided.

Scientific shop management has been satisfactorily continued at the various arsenals during the past year. The results indicate considerable savings in the cost of articles fabricated.

SIGNAL CORPS.

The work of the Signal Corps has been satisfactorily performed.

A systematic attempt is being made to detach the Signal Corps from nonmilitary work and work which can be done by other troops, such as much of the work about seacoast defenses. It is believed that the installation of all electrical apparatus should be done by the Engineers, while its upkeep should be in the hands of the Coast Artillery. Both of these corps are well equipped and qualified to do this special work, and there is no reason for the injection of a third corps whose work is primarily with troops in the field. The Signal Corps men assigned to duty with the Alaska telegraph, cables, and radio stations have been reduced to 5 officers and 182 men, and it is hoped that the transfer now pending of this system to the Post Office Department will be accomplished. It is hoped that this transfer will go into effect as soon as possible upon the passage of the necessary legislation, and that the Signal Corps will be relieved immediately thereafter from the operation and maintenance of all the telegraph lines, cables, and radio stations of the Alaskan system.

When this transfer is effected, it will be possible to add one field company to the five already organized, and one additional telegraph company; both of these organizations are badly needed for service with the mobile troops. The field companies are organizations for tactical purposes; using the buzzer, telephone, and radio, their importance is steadily increasing, and it is believed that these companies represent the best development of the service of information now existing, and they should be so increased that one company may be assigned to each of the six territorial commands into which the Army has recently been segregated and eventually two to some of these.

At present the field companies are stationed as follows: Texas City, 1; along the southern border, 1; at Fort Leavenworth, 1; Hawaiian Islands, 1; Philippine Islands, 1.

It is believed that the number of these companies should be increased, and that the number of radio pack sets with each should be increased as suggested in the report of the Chief Signal Officer.

The field companies, as is obvious from their equipment, are for tactical uses, and should not be employed to join a command with its base, to tie the various units together in camp, or to connect an expeditionary force with the coast or with the permanent telegraph systems of the country. These duties should be performed by an organization known as a telegraph company. One telegraph company has been established. It consists normally of 4 officers and 139 enlisted men, and is provided with the means of constructing about 125 miles of semipermanent telegraph and telephone lines, which can, of course, be increased with added transportation. It is a most useful and business-like organization that should be first on the ground when camps of instruction are established and at advanced bases.

The need for animals to horse this company is obvious. At present two platoons of one telegraph company are placed at Fort Leavenworth; one will be stationed at San Antonio; a dismounted detachment is in Hawaii; and, later, it is contemplated placing the headquarters and one platoon of a second company at the Presidio of Monterey, with the other platoons in the Canal Zone and in Hawaii.

The importance of developing aviation is thoroughly appreciated, and constant progress is being made in the instruction of aviators and the building up of a suitable force of flyers. It has not been deemed advisable, however, to recommend large appropriations now, in view of the fact that our total appropriation is limited and there are some needs of the service which are far more pressing at the present time, such as field artillery, guns, and ammunition.

The aero squadron is the tactical unit proposed for assignment to a division. When a sufficient number of squadrons are organized, companies will be placed in our territorial possessions and at least 1 company in each of the departments.

PORTO RICAN REGIMENT OF INFANTRY.

In my opinion, this regiment should be made a three-battalion regiment, and maintained at a minimum strength of at least 100 men per company. In addition, there should be a reserve sufficient to bring it to full statutory strength.

Conditions arising in this regiment with reference to the health of its officers, incident to long tropical service, have brought to the attention of the War Department the necessity for placing this regiment upon a footing which will make its officers a part of the body of officers of the Army on an equal footing with the others as to matters of duty, promotion, etc., so that suitable officers may be assigned to duty with the regiment for a definite period, and on completion of the detail be assigned to other regiments, as is now done in the Philippines. Many of the officers now with the regiment have been something like 12 years in the Tropics; they are beginning to feel the ill effects of the climate, and it will soon be necessary to retire some of them, or to establish conditions under which they can be assigned to duty in temperate regions. The regiment is a good one, and I believe it should be made a part of the Infantry branch of the Army, even though kept in its present station permanently.

RIFLE SHOOTING IN THE PUBLIC SCHOOLS.

Measures, which it is trusted will be enacted into law, have been presented to Congress, providing for a certain amount of Government support of rifle shooting in the public schools. The use of the rifle is rapidly passing out of our population, and it is most important that our youth should be skilled in its use, as skilled use of the rifle is one of the most important features of a soldier's training, and in case of war the proper instruction of our troops would be greatly facilitated if recruits have been trained in the use of this arm. There are few ways in which better returns can be obtained for a moderate expenditure of public funds than in encouraging the training of our youth in the use of the rifle.

OFFICERS WITH FOREIGN ARMIES.

Arrangements have been made during the past year for the regular assignment of officers to regiments of the different arms of the French and German armies. It is believed that this will result in great benefit to our service, in that these officers will be given an opportunity to see at first hand what is being done in the best European military establishments and will bring to our own service the results of their observations. The officers selected for this duty will be, as far as practicable, those who have had special preparation through work in our own service schools and the War College, and it is believed that this work, plus their experience abroad, will make them most valuable instructors and staff officers in our own Army.

MILITARY EDUCATION.

INSTRUCTION AT COLLEGES AND SCHOOLS AT WHICH REGULAR ARMY OFFICERS ARE DETAILED.

Under section 1225, Revised Statutes, and amendments thereto, officers of the Regular Army are detailed as military instructors to certain schools, colleges, etc., that fulfill specified requirements as to number of students attending and amount of instruction given in military subjects.

Under the Morrill Act of July 2, 1862, certain land and money were donated—

> to the endowment, support, and maintenance of at least one college (in each State) where the leading object shall be, without excluding other scientific and classical studies, and *including military tactics*, to teach such branches of learning as are related to agriculture and the mechanic arts, etc.

Under the present law there is no specified standard of military instruction required, and no penalty attached to insufficient or improper military instruction that endangers the receipt of the annual funds appropriated. Unless the following provision of the act of August 30, 1890, could be construed as such, viz:

> If the Secretary of the Interior shall withhold a certificate from any State or Territory (as to whether such State or Territory is entitled to receive its share of the appropriation for colleges) of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior.
>
> If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury.
>
> And the Secretary of the Interior is hereby charged with the proper administration of this law.

The Secretary of the Interior has not under him the necessary trained military personnel to determine, so far as the proper military instruction is concerned, whether or not the intent of the provisions of the Morrill Act regarding "military tactics" is properly enforced, and does not attempt to do so.

The War Department does inspect the several colleges to which Army officers are detailed, but has no remedy for the enforcement of the proper amount of military study other than the withdrawal of said officers, in certain cases, the result being that in some colleges the minimum amount possible is set aside for the maintenance of the military department.

To cite an example of the present apportionment of funds appropriated—and this example is only one of a number—the Rhode Island State College received last year a total of $82,500 from the sale of lands under the various acts for the purpose of maintenance. Of this amount, not one cent was set aside for the maintenance of the military department, although a total of $200 was given said department from the college maintenance fund.

It is believed that the Secretary of the Interior should designate the Secretary of War as the proper person to specify the kind and amount of military instruction, and to determine when same has been complied with.

In conformity with the policy of the War Department relative to coordinating the work of the military departments of the educational institutions to which officers of the Army are detailed, bulletins will be issued from time to time.

The purpose of these bulletins will be to indicate the general policy as to this instruction and to endeavor to increase the efficiency thereof by helpful suggestions based upon successful methods observed by the General Staff committee having supervision of these matters, and to publish information of general interest to the military departments of educational institutions as occasion may arise.

It is not intended that these bulletins shall be considered in the nature of orders, but that they shall serve as a medium for the exchange of ideas and for bringing the officers on duty at various institutions into closer touch with each other.

At the last annual inspection it was generally found that sufficient progress had not been made in practical instruction; that too much time was spent in close order and ceremonies at the expense of good theoretical instruction and practical fieldwork.

Few institutions had reached a satisfactory degree of efficiency in fieldwork, and a number of institutions which could have participated in practice marches or target practice had not done so. The theoretical instruction fell far below what it should have been, not from lack of conscientious effort, but from nonuse of the applicatory method of teaching.

Close order drills and ceremonies have a disciplinary training and effect not to be obtained in any other manner, but proficiency in such drills should not be considered or treated as the final result to be accomplished in a season's training, as sometimes appears to be the case.

In the lecture course, each one of our wars should be taken up and a true history of our past military operations and policies imparted to the student. Upton's Military Policy should be used to prepare these lectures and they should be informal talks rather than prepared lectures. These lectures and talks will embody a brief résumé of the main features of the military history of the United States, our present military system and a thorough and careful exposition of the approved military policy. It is of the utmost importance that graduates of these institutions, who are men of education and intelligence, shall take with them to their communities sound and correct ideas on these important subjects, vital to the establishment of a sound military policy rather than mere mechanical instruction.

Students should be encouraged to study our military policy and our Army in order to learn our needs. Some institutions, notably the Virginia Military Institute, have had instruction along these lines for some time.

There has been a remarkable increase of interest in military instruction during the past year at colleges and schools where such instruction is maintained, and a disposition has everywhere been shown to come into closer relations and better understanding with the War Department with the view to adopting some general line of policy as to the scope and character of the work.

This movement is a most encouraging sign, as these schools and colleges have a total enrollment of 29,401 and include the agricultural and mechanical colleges, some of the State universities and many private military schools, at all of which military instruction is given. At some of the schools the course in military training varies from indifferent to excellent, and it is believed that great good will result from the establishment of closer relations with the War Department and the gradual adoption of a course of military instruction which will be more in harmony throughout the whole class of educational institutions having such instruction. There has been a general lack of sound instruction in military history and military policy. Perhaps too much time has been given to the purely mechanical part of the instruction and too little to impressing upon the students true ideas of our military history and an understanding of the military needs of the country, such as proper organization and disposition of the Army, building up of reserves, and enlistments adapted to the requirements of different types of men.

The students' military instruction camps, held at Monterey, Cal., and Gettysburg, Pa., were very successful. Ninety universities, colleges, and high schools were represented. The authorities of the institutions represented have, practically without exception, expressed their thorough approval of the results accomplished, as have the students and parents, and everything points to very much larger camps for the next year.

The advantages accruing from these camps may be summarized as follows:

The physical benefits derived from the active, healthful, outdoor life of a camp.

The acquiring of habits of discipline, obedience, order, self-control and command, with their resultant gain in business efficiency.

The training imparted to the young men in military maneuvers, tactics, care of troops, camp sanitation, and rifle practice, resulting in their better preparation to discharge their military duty to their country should it ever have to call upon them in time of need, thereby saving the great waste in valuable lives and money which has always occurred at the beginning of previous wars due to the ignorance in such matters of the newly created officers and men.

The benefit to the country in the fostering of a patriotic spirit, without which a nation soon loses its virility and falls into decay; also the dissemination among the citizens of the country by the return of the students who attended camp of a more thorough knowledge of military policy, the true military history of our country, and its military needs, all necessary to the complete education of a well-equipped citizen in order that he may himself form just and true opinions on military topics.

I attach hereto, as appendices 10 to 13, a letter from the President of the United States concerning these camps, also one from the president of Lehigh University, whom the students who attended the Gettysburg camp during the past summer, elected as president of the Students' National Reserve Corps; also a list of college presidents forming a board of advisers and a copy of a constitution adopted by the students of this year's camps.

The instruction given at these camps has been of the greatest value to the young men participating, and will tend not only to give them some ideas of our military situation and policy, but it will also tend to establish nuclei of information in the student bodies of the various universities represented.

Students were required to pay for their transportation, their subsistence, and their clothing, the two latter items amounting to an average of $15.

In view of the great success of these two camps, the War Department has decided to repeat them during the ensuing year.

To accommodate the much larger number of students expected and to reduce the amount they will have to pay for transportation, four camps will be established: One at Burlington, Vt., for the northeast section of the country; one at Monterey, Cal., for the western section; one in the middle West, and one in the southeast section, the exact locations not having as yet been decided upon.

The great interest taken in them by the presidents of the leading universities, the enthusiasm of the students and parents, and the general approval of the public at large, all point to a full attendance next year, and I venture to predict their continued success and prosperity. I consider them of great value and full of possibilities in the direction of implanting sound ideas of national preparedness in our college men, and, through them, the people of the country.

CIVIL WAR VETERANS' ENCAMPMENT AT GETTYSBURG.

At this camp about 55,000 veterans of the Civil War were assembled and cared for for eight days in a manner to reflect great credit upon the officers in charge of the encampment. The sanitary conditions were excellent; the food was ample and satisfactory in every way. In short, this very large collection of aged and infirm men passed through the encampment with very little sickness. The absence of sickness and disability was remarkable.

THE WORK OF THE ARMY IN NATIONAL DISASTERS.

The Army was called upon during the past year again to assume the direction of relief work incident to floods and cyclones in Ohio and neighboring States, and throughout the length of the Mississippi Valley. The work was conducted most efficiently, and a great number of lives and an immense amount of property saved. So quietly and efficiently was the work done the people of the country hardly realized its tremendous extent, involving as it did, the feeding of many thousands of people a day for some time. (Appendix No. 14.)

The Army also rendered excellent service in connection with forest fires in various portions of the country. In short, it has again, in many fields, shown its capacity to take hold of great situations and handle them efficiently and promptly and illustrated, as it has time and again of recent years, that it has been one of the greatest life-saving forces of the Government, always ready and always efficient.

FIELD SERVICE OF TROOPS.

Throughout the year, as during the preceding year, it has been necessary to maintain a strong patrol on the southern border for the purpose of enforcing the neutrality laws, aiding in the maintenance of customs regulations, and insuring the safety of people living immediately on the border. The work of the troops has been performed in an admirable manner, and one which has indicated a high degree of discipline.

The division assembled at Texas City in February of last year has been maintained in excellent condition, and the camp sanitation has been such as to reflect great credit upon the division commander and the officers of the Medical Corps having immediate charge of the work.

There have been some minor military operations in the Philippines against hostile Moros, incident to undertaking the disarmament of these people and placing them upon a footing, in all that pertains to the ownership and carrying of arms, similar to that obtaining in the Filipino portion of the islands. The work of the troops has been very effectively performed under conditions of a very trying character.

The headquarters and two battalions of infantry sent to China last year have remained on the line of communications between Tientsin and Peking under a previous international agreement.

Communications from the commanding general, Philippine Department, foreshadow recommendations to withdraw American troops from the southern islands and handle the situation there with scouts and constabulary.

CONCLUSIONS.

In conclusion I earnestly invite your attention to the following recommendations which are embodied in this and preceding reports. They are of vital importance in establishing a condition of reasonable preparedness for possible emergency.

First. The establishment of a reserve of trained men for the Regular Army sufficient to bring it immediately to full statutory strength and to replace the losses of the first three months of war.

Second. The prompt provision of the remaining 42 per cent of our very modest project for Field Artillery Guns as yet unprovided for and the necessary ammunition for those now made or under manufacture. The present shortage in ammunition constitutes a grave source of danger. Ammunition of this type can not be bought in case an emergency should arise requiring its use without great delay; no nation carries it for sale. It can not be manufactured in this country no matter what efforts we make without such delay as would probably render it unavailable during the emergency. The condition is a very grave one, greatly diminishing our chance of success in case of war, and should be remedied with the least possible delay. The importance of promptly securing this ammunition can not be too strongly stated.

Third. The creation of the necessary organizations to give three complete tactical Infantry divisions within the continental limits of the United States.

Fourth. The enactment of such personnel legislation as will eliminate effectively the unfit and stimulate the efficient officer to continued efforts through establishing a condition under which progress in rank and command will have a close and dependent relationship upon capacity, fitness, and accomplishment. Such is not the condition now.

The first and second of the above recommendations deal with conditions which should be corrected with the least possible delay, as their continuance means disaster in case of war. Their correction will take time, and measures looking thereto should be pushed as rapidly as possible.

The third is necessary to complete one field army of regular troops within the continental limits of the United States. It means a field army of about 70,000 mobile troops in a population of more than 90,000,000.

The fourth is essential if we are to attain the highest degree of efficiency.

Very respectfully,

LEONARD WOOD,
Major General, Chief of Staff.

The SECRETARY OF WAR.

APPENDIX 1.

Changes showing increases and decreases in Army since issuance of General Order No. 138, Oct. 9, 1911.

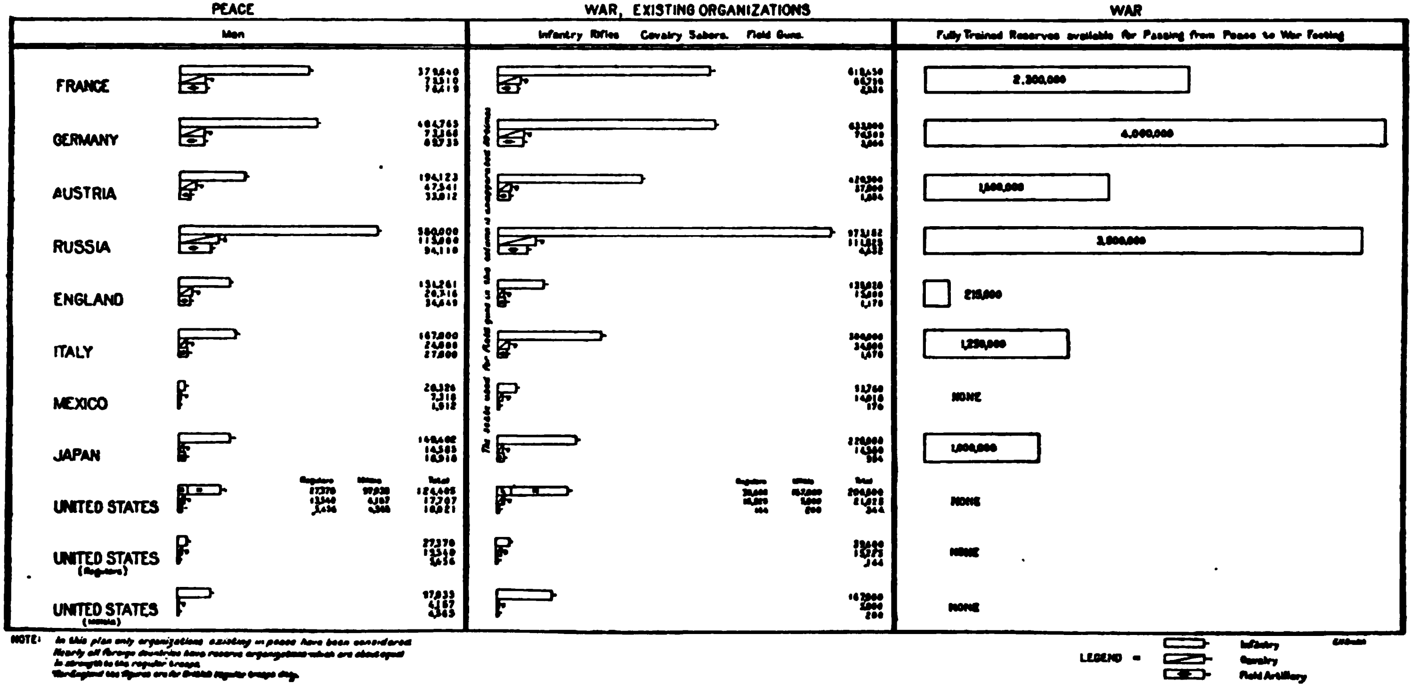
	Cavalry.	Infantry.	Field Artillery.	Coast Artillery Corps.	Engineers.	Military Academy.	Signal Corps.	Ordnance Department.	Quartermaster Corps.	Indian Scouts.	Recruiting parties, etc.	Prison guards.	Service School detachments.	Disciplinary companies.	Total.
Enlisted strength, as fixed by General Order No. 138, 1911	13,286	27,583	5,416	18,471	1,942	501	1,212	730	403	75	7,000	320	584		77,523
INCREASES.															
General Order No. 8, 1912 (Cavalry and Infantry, Philippine Department)	537	3,349	1												3,887
General Order No. 45, 1912						129		5					4		138
Twenty-fifth Infantry on account of Hawaiian service		84													84
Paragraphs I and II, General Order No. 19, 1913 (Cavalry and Infantry, Hawaiian Department)	321	2,640		136											3,097
For 4.7 gun Field Artillery battery			28												28
Paragraph I, General Orders, No. 44, 1913 (Infantry, extra sergeants for Militia)		42	12												54
Organization 2 4.7-gun batteries September, 1913			56												56
Company G, Fifth Infantry, temporary increase		6													6
Paragraph II, General Orders, No. 61, 1913													6		6
Act of Congress, Mar. 4, 1913						1									1
General Orders No. 67, 1913	40			324								20		63	447
Total increase	898	6,121	97	460		130		5				20	10	63	7,804
DECREASES.															
General Orders No. 8, 1912													1		1
Paragraph IV, General Orders No. 71, 1913											460		6		466
Total decrease											460		7		467
Net increase															7,337
Strength of Army Dec. 9, 1913	14,184	33,704	5,513	18,931	1,942	631	1,212	735	403	75	6,540	340	587	63	84,860

	3
Peace	Wa
555,670.	700.
12.5	17.
73.1	96.

APPENDIX 3.

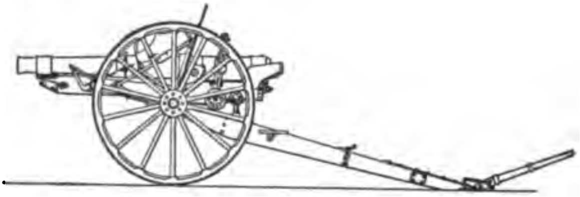
PLAN SHOWING STRENGTH OF THE THREE ARMS IN PEACE AND IN WAR.

—1910—

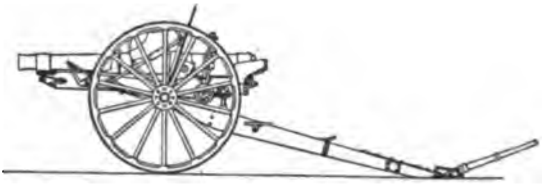


NOTE: In this plan only organizations existing in peace have been considered. Nearly all foreign countries have reserve organizations which are about equal in strength to the regular troops. For England the figures are for British regular troops only.

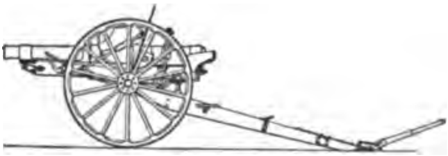
APPENDIX 4.



RUSSIA



GERMANY



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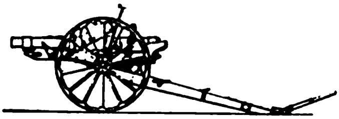
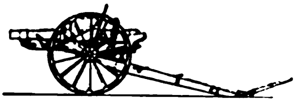


AUSTRIA



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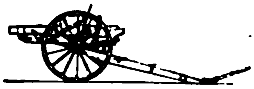

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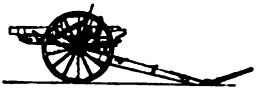
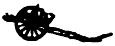


ENGLAND



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APPENDIX 5.

ELIMINATION OF UNFIT OFFICERS.

Some means must be provided for the elimination of unfit officers, if the highest degree of efficiency is to be attained.

The full efficiency of an organization of men can not be secured without a system by which the merits of the individuals shall have some effect upon their advancement. The absence of such a system not only causes the loss of the service of selected persons in the higher and more responsible places, but it means failure to utilize the healthful stimulus to effort which is inspired by the hope of honorable preferment. The Army has long suffered from this lack. Up to the grade of colonel promotion therein is entirely by seniority in each branch, and there is no way under the law by which an officer, no matter what his merit, can be advanced a single number, except by making him a general officer. Even temporary service in higher grades can be had in three cases only, viz, by detail in the Ordnance Department, and by detail of first lieutenants to serve as captains in the General Staff and in the Judge Advocate General's Department.

Selection in promotion has been the subject of but little consideration; an insuperable difficulty has been thought to be the impossibility of excluding from the selection influences other than those for the good of the service, especially political influence. But it is believed that the great measure of success which has attended the legislation for placing the civil service of the Government upon a basis of merit is an indication that a similar result can be achieved with the military service, in which, since promotions are now made in accordance with rigid law, there is no entrenched system of patronage to be dislodged. Conservative opposition is most to be looked for in the Army, where there is jealous fear of the effects of favoritism, but this would disappear under the influence of a proposition of law to place the selections where they belong, in the hands of the service itself, which surely is worthy of the trust, by lodging it with boards of officers so chosen as not to be personally affected by their decisions and sworn to act in accordance with the best interests of the service.

The main arguments for promotion by selection are familiar to all who have given to the subject even casual thought. They rest upon the stimulus which the hope of reward gives to increased effort, thereby improving the whole body; and the right which the Government should enjoy, in common with all great organizations, to have its important and responsible positions filled by the most competent persons in its service. The principle has never met with favor in our service by reason of the profound distrust which pervades it of the methods by which such selections as have been permitted under former laws were almost invariably made. Officers prefer to submit to the state of affairs under which the one whose conduct and capacity are just sufficient to retain him in the service advances equally with the most meritorious, rather than to risk being passed over by those whose interest with persons of political power or whose social connections are such as to enable them to set in motion the forces which have been seen to prevail in former competitions for all staff appointments, except the few which were the reward of success in examinations. Any scheme for the introduction of selection in the government of promotion would, in the effort to obtain the support of the service, be foredoomed to failure which did not meet this long-standing and well-founded objection.

Any plan adopted should have a feature for effecting the elimination of those who, after ample opportunity for demonstrating their character, have been found least efficient, under a system which shall not impose too great hardships upon individuals, and shall not involve a considerable charge for their maintenance upon a retired list.

I believe that the essential principles of selection and elimination would be properly secured by a bill embodying the following features:

First. A proportion of all promotions should be by selection from the grade below.

Second. The selections should be made by boards of officers of the branch of the service in which the vacancy to be filled exists, all members of which should be senior to the eligible grade.

Third. All officers should be promoted to the various grades below that of brigadier general after certain total periods of service as officers, to be fixed for each grade.

Fourth. Surplus of officers in any grade over the statutory number authorized, produced by the process just mentioned, should be relieved by the selection of officers therefrom for retirement.

Fifth. Selections for retirement should be made by boards of officers of the same branch of the service, all senior to the grades to be passed upon.

Sixth. The pay of officers retired in this manner should be a percentage of their active pay, depending upon their length of service.

A reasonable length of service for promotion to the various grades would be somewhat as follows:

	Years.
To first lieutenant	1
To captain	15
To major	21
To lieutenant colonel	27
To colonel	31

The percentage for retired pay could be so fixed as to involve no increase of cost of the active and retired lists of the Army over the present expense.

Without some artificial system of elimination of officers, natural casualties bring officers to the upper grades at average ages beyond those at which they are best fitted to take up the duties of those grades, and keep them in close touch with the details of junior positions long after such details have ceased to interest them or can afford proper occupation for their expanding faculties. An examination of the Army list shows that in the Cavalry service the age of the junior colonel at present is 58 years; that of the junior lieutenant colonel, 55 years; and that of the junior major, 47 years.

Undesirably high as these ages are, they are very much lower than they would have been had the Calvary not been increased by 50 per cent by the act of February 2, 1901. Without this increase these ages would have been as follows: That of the junior colonel, 61 years; that of the junior lieutenant colonel, 58 years; and that of the junior major, 59 years.

The reason of this slow promotion, of course, lies in the small proportion of high officers to those of lower grades which is required by military organization. The only way of accelerating it is by artificially weeding out some of the officers, for to increase the percentage in the higher grades would give more of those grades than are needed, which would produce a top-heavy and uneconomical service. As stated in my last annual report, the method of examination for promotion has failed not only to eliminate a sufficient number to give a reasonable flow of promotion, which indeed it is not designed to do, but even to relieve the service of officers who are well known to be of low efficiency. Experience has shown that officers are very slow to put one another out of the service for mere inefficiency, although they will do it for disgraceful conduct; and it has also shown that influences outside the Army are very potent in preventing such action, and always will be unless the law be made so rigid that there is no escape from its operation, as is the case in the Navy. The increasing ages of officers under the inevitably slow promotion of the present system makes the subject of a remedy one of constantly increasing difficulty. The longer the cure is put off the larger will be the accumulation of superannuated officers whose disposition will confront those attempting to improve the condition. The matter would have been more easily handled 10 years ago, when an increase of the Army had produced a flow of promotion, temporarily relieving the stagnation. It can be more easily dealt with now than 5 years hence. Some form of selection for promotion exists in the military and naval service of every important nation except the United States, and artificial elimination is found in all of them and also in the United States Navy, the only exception to this process being the United States Army. I do not think it necessary to confess that we can not do what every other military or naval service in the world already does.

Every annual message of the President except one, and every annual report of the Secretary of War since the Spanish-American War has contained an urgent reference to this subject. President Roosevelt said in his annual message of December 8, 1908:

"As regards the Army, I call attention to the fact that while our junior officers and enlisted men stand very high, the present system of promotion by seniority results in bringing into the higher grades many men of mediocre capacity who have but a short time to serve. No man should regard it as his vested right to rise to the highest rank in the Army any more than in any other profession. It is a curious and by no means creditable fact that there should be so often a failure on the part of the public and its representatives to understand the great need, from the standpoint of the service and the Nation, of refusing to promote respectable elderly incompetents. The higher places should be given to the most deserving men without regard to seniority; at least seniority should be treated as only one consideration. In the stress of modern industrial competition no business firm could succeed if those responsible for its management were chosen simply on the ground that they were the oldest people in its employment; yet this is the course advocated as regards the Army, and required by law for all grades except those of general officer. As a matter of fact, all of the best officers in the highest ranks of the Army are those who have attained their present position wholly or in part by a process of selection.

"The scope of retiring boards should be extended so that they could consider general unfitness to command for any cause, in order to secure a far more rigid enforcement than at present in the elimination of officers for mental, physical, or temperamental disabilities. But this plan is recommended only if the Congress does not see fit to provide what, in my judgment, is far better; that is, for selection in promotion, and for elimination for age. Officers who have failed to attain a certain rank by a certain age should be retired—for instance, if a man should not attain field rank by the time he is 45 he should of course be placed on the retired list. General officers should be selected as at present, and one-third of the other promotions should be made by selection, the selection to be made by the President or the Secretary of War from a list of at least two candidates proposed for each vacancy by a board of officers from the arm of the service from which the promotion is to be made. A bill is now before the Congress having for its object to secure the promotion of officers to various grades at reasonable ages through a process of selection, by boards of officers, of the least efficient for retirement with a percentage of their pay depending upon length of service. The bill, although not accomplishing all that should be done, is a long step in the right direction; and I earnestly recommend its passage or that of a more completely effective measure."

President Taft said in his annual message of December 7, 1909:

"The Secretary of War calls attention to a number of needed changes in the Army in all of which I concur, but the point upon which I place most emphasis is the need for an elimination bill providing a method by which the merits of officers shall have some effect upon their advancement and by which the advancement of all may be accelerated by the effective elimination of a definite proportion of the least efficient. There are in every army, and certainly in ours, a number of officers who do not violate their duty in any such way as to give reason for a court-martial or dismissal, but who do not show such aptitude and skill and character for high command as to justify their remaining in the active service to be promoted. Provision should be made by which they may be retired on a certain proportion of their pay, increasing with their length of service at the time of retirement. There is now a personnel law for the Navy, which itself needs amendment, and to which I shall make further reference. Such a law is needed quite as much for the Army."

Secretary Root said:

"Nothing can be more important than that the officers of the Army shall feel that their rise in rank depends upon what they do; that ability, intellectual activity, faithful performance of duty, and gallant conduct are more certain claims to preferment than social or political influence. A system of promotions which is divorced from the efficiency records is not merely unjust, but it destroys ambition and checks the effort of the Army. * * *

"The present system of promotion by seniority should be modified as to all officers now or hereafter below field rank by making a specific proportion of the promotions to each grade for seniority and a specific proportion on the basis either of efficiency records in the War College or heretofore in the service schools, including both elements of work done during actual attendance and subsequent thereto or for gallantry in the field during war, or both, accompanied in each case by evidence of faithful performance of the ordinary duties of the line."

Secretary Taft said:

"This bill, it is believed, will correct the two evils mentioned above which exist among the officers of the Army—the evil of superannuation and the evil of the presence of inefficient members, whom existing laws are not efficient in eliminating.

"* * * I urge most earnestly the favorable consideration of this bill, and regard the passage of this or some similar measure as indispensable to the efficiency of the Army."

Secretary Wright said:

"There is another and very necessary way of increasing the efficiency of the Army in respect of its officered personnel without increasing the number, and that is by a process of elimination of officers who are not of the best. There are a number of officers in the Army who do not take that interest in the service that is demanded, and while they keep within the letter of the law and regulations it is impossible to get rid of them and fill their places with more efficient officers, so as to keep the efficiency of the service always up to the highest standard.

"* * * These conditions, to which attention is thus drawn, have long had the earnest and careful thought of some of the best minds in the service. I think it is agreed by them that there is no other subject so vitally important to the welfare of the Army. Such was the view of my predecessor, who twice recommended the enactment of legislation on the subject as indispensable to the efficiency of the Army. From such knowledge on the subject as my brief service in the War Office has given me, supplementing a considerable experience with and observation of Army administration while in the Orient, I fully agree in this judgment."

Secretary Dickinson said:

"I am of the opinion that the entire absence of a merit system in the advancement in their calling of the officers of the Army is not good for the efficiency of the organization. The degree to which such a system is lacking in the Army is not generally appreciated, and it is not generally understood that, except by detail to the Ordnance Department or to the lowest grade of the Judge Advocate General's Department or the General Staff, it is impossible to advance an officer a single step beyond his place in the branch of the service, no matter how great his merit may be nor how mediocre those immediately above him unless he is made a general officer. The reasons for establishing a merit system in the Army are not essentially different from those applying to any other organization."

Secretary Stimson, in 1911, said:

"I agree with my predecessors, Mr. Root and his successors, in the great need of a fair merit system governing both promotion and elimination."

APPENDIX 6.

BULLETIN
No. 18.

WAR DEPARTMENT,
Washington, October 3, 1912.

With a view to standardizing the instruction imparted at the Military Academy and at the various service schools on the subject of the employment of Cavalry, the following is announced as the policy of the War Department in respect to the use of that arm:

1. Mounted action is the main rôle of the Cavalry arm and its organization, armament, and instruction should be with a view to rendering it effective in such action.

Dismounted action is, however, a very important rôle of the Cavalry, and neither an organization nor the method of instruction which fails to provide for the effective use of Cavalry dismounted will enable it to perform fully its functions in war.

2. The organization should be such as to permit of the greatest mobility, which is the essential quality of the Cavalry, while providing units of great smashing power in the charge and a sufficient number of rifles to make effective its use when required as a dismounted force.

3. Cavalry must maneuver freely and widely without fearing too much for its rear; and being often at a distance from the main body of an army, its commander must be clothed with authority to conform to actual conditions.

4. While the chief task of the Cavalry is to assist the other arms in accomplishing the common object, its rôle is often of primary importance. The action of Cavalry must be bold and daring; it must, whenever practicable, assume the initiative, seeking out the enemy and placing him upon the defensive.

5. The principal weapon of Cavalry in mounted action is the horse and the force of impact should be utilized to the utmost. The terrain and nature of the operations will determine which of the other weapons must be used.

6. When circumstances permit, Cavalry opposed to Cavalry should fight mounted, thus retaining mobility and power of maneuver necessary to its security and success.

7. The historical value of Cavalry, including the experience and evolution of our own and that of other countries, must be carefully studied, and due consideration should be given to the greater magnitude of our future Cavalry operations as compared with our experiences since the Civil War.

8. The use to which Cavalry should be put in campaign is summarized as follows:

(*a*) To seek and destroy the enemy's Cavalry.

(*b*) Screening, contact, and reconnoissance.

(*c*) Seizing and holding important advanced or isolated positions, thus delaying the advance of the enemy until the arrival of the other arms.

(*d*) To operate on the flank and in the rear of the enemy.

(*e*) Raids and other enterprises requiring great mobility.

(*f*) The mounted charge at the opportune moment against Infantry or Field Artillery.

(*g*) Energetic pursuit of a retreating enemy or covering retreat of it own forces.

(*h*) When none of the above rôles has been assigned to it, Cavalry may go to the assistance (dismounted) of hard pressed Infantry to fill gaps in the firing line.

By order of the Secretary of War:

W. W. WOTHERSPOON,
Major General, Acting Chief of Staff.

Official:
GEO. ANDREWS,
The Adjutant General.

APPENDIX 7.

WAR DEPARTMENT,
OFFICE OF THE CAVALRY BOARD,
Washington, October 18, 1913.

From: The President of the Cavalry Board.
To: The Adjutant General.
Subject: Report on cavalry organization.

The Cavalry Board, in compliance with instructions contained in letters from The Adjutant General of March 7 and July 7, 1913 (1951774/N and 1951774/S), after familiarizing itself with the drill regulations of other nations and procuring all the data available in connection with the proper organization of a cavalry regiment, prepared a tentative system of cavalry drill regulations (copy herewith) for four-squadron and six-squadron regiments.

On July 16 the Board proceeded to the camp in the vicinity of Winchester, Va., where, until September 30, 1913, it was engaged in testing the tentative drill regulations and in experimentation with a view to determining questions submitted to the board.

As a result of its study, of its observation of European services, and of the experiments conducted by the board in the Cavalry camp of instruction near Winchester, the board recommends:

1. That the captain's command, to be designated a squadron in conformity with the practice of most other nations, consist of approximately 155 men—this in order to furnish a fighting strength of 133 men in ranks and to provide for scouts, pioneers, and signal men.

That the officers of the squadron consist of one captain and four lieutenants, except as qualified by further remarks of individual members.

That the enlisted strength of the squadron consist of—

First sergeant	1
Quartermaster and mess sergeant	1
Stable sergeant	1
Seargents	12
Corporals	12
Lance corporals	4
Cooks	3
Farrier	1
Horseshoers	2
Saddler	1
Wagoners	3
Trumpeters	4
Privates	110
Total enlisted	155

Mounted:	
Officers	5
First sergeant	1
Quartermaster and mess sergeant	1
Stable sergeant	1
Sergeants	12
Corporals	12
Lance corporals	4
Cooks	3
Farrier	1
Horseshoers	2
Saddler	1
Trumpeters	4
Privates	96
Total horses required	143

Remounts in training not to be considered in this total.

2. That the regiment consist of—
   - 1 colonel.
   - 1 lieutenant colonel.
   - 2 majors.
   - 1 captain and adjutant.
   - 1 captain, quartermaster.
   - 2 veterinarians.
   - 1 sergeant major.
   - 2 quartermaster sergeants.
   - 2 color sergeants.
   - 1 trumpeter sergeant.
   - 6 squadrons.
   - a depot squadron.
   - a machine-gun squadron.
   - a regimental detachment.

The machine-gun squadron to consist of—
   - 1 captain.
   - 1 first lieutenant.
   - 1 second lieutenant, and approximately 66 enlisted men (4 guns).

To be organized as follows:
- 1 first sergeant.
- 1 quartermaster sergeant.
- 6 sergeants (4 as chiefs of squads, 1 as armorer, 1 range finder).
- 6 corporals (4 as gunners, 2 as scouts and signal men).
- 2 cooks.
- 2 trumpeters.
- 4 (farrier, wagoner, horseshoer, and saddler, 1 each).
- 44 privates (12 in gun squad, 12 drivers, 8 ammunition carriers, 4 intrenching-tool carriers, 8 scouts and signal men).

Total: 3 commissioned; 66 enlisted.

The headquarters detachment to consist of—
- 2 clerks (pay of corporal).
- 1 horseshoer.
- 2 wagoners.
- 9 privates.

The depot squadron to consist of—
- 1 captain.
- 1 first lieutenant.
- 1 second lieutenant.
- 1 first sergeant.
- 1 quartermaster sergeant.
- 4 sergeants.
- 8 corporals.
- 1 horseshoer.
- 1 farrier.
- 2 cooks.
- 1 saddler.
- 1 trumpeter.
- 10 privates.

3. That the brigade organization be provided in time of peace and war, to consist of—

Headquarters:
- 1 brigadier general.
- 2 personal aides, lieutenants.
- 1 brigade adjutant, major.
- 1 sergeant, clerk.
- 1 wagoner.
- 6 privates.

Troops:
- 2 regiments.

4. That the organization of a cavalry division be governed by the mission of the particular force, the terrain in which it is to operate, and the character of the opposition expected. That the normal composition of the cavalry division in peace and war be as follows:

Headquarters:
- 1 major general.
- 3 aides, captains or lieutenants.
- 1 chief of staff, colonel.
- 1 assistant chief of staff, major or captain.
- 1 division adjutant, major.
- 1 division inspector, major.
- 1 division judge advocate, major.
- 1 division quartermaster, lieutenant colonel.
- 1 assistant quartermaster, captain.
- 1 division surgeon, lieutenant colonel.
- 6 clerks, civilian, and when acting independently.
- 1 division engineer, lieutenant colonel.

Each division to be provided with a headquarters detachment to consist of—
- 1 sergeant.
- 1 corporal.
- 1 cook.
- 14 privates.

Troops:
3 cavalry brigades.
1 regiment of horse artillery (one battery to be attached to each cavalry brigade).
1 pioneer battalion of engineers (mounted).
1 field battalion of signal troops.
2 ambulance companies.
2 field hospitals.
Service of supply.
1 ammunition train.
1 supply train (including sanitary reserves).

The board understands that the necessary auxiliary units required for Cavalry divisions sent on special missions will be supplied from the auxiliary division.

5. That a combination of two or more Cavalry divisions constitute a Cavalry corps.

6. That authority of law be sought for the appointment of a Chief of Cavalry with rank commensurate with the task of inspection and coordination which should be assigned him.

7. That in any reorganization of the Cavalry arm undertaken, great care be observed to retain in that arm at least the relative numbers in each grade now provided by law in order to insure a proper flow of promotion, which the board considers as vitally essential to the efficiency of the arm.

The board considers that the tentative drill regulations herewith require amendment in certain minor particulars, but in general they were very satisfactory and are a great improvement over the present regulations in simplicity and directness and are suited to rapid mounted movements as well as to dismounted action.

The board desires to invite attention to the recommendations as to minor details of organization, instruction, and inspection contained in its report of February 15, 1913.

E. J. McClernand,
Brigadier General, U. S. A., Retired.
C. H. Murray,
Colonel, Twelfth Cavalry, Member.
(See individual report of Lieut. Col. Dickman herewith.)
Fred S. Foltz,
Lieutenant Colonel, General Staff, Member.
J. McI. Carter,
Major, Cavalry, Member.

Frank Parker,
(Subject to separate report)
Captain, Eleventh Cavalry, Recorder.

Signed, subject to further personal remark, as follows: Number and duties of lieutenants in regiment; number of regiments required in arm to insure best use of our trained personnel and to give the greatest strength and efficiency on the outbreak of war.

Individual remarks by Col. Murray.

The ratio of captains to lieutenants is too small to insure a proper flow of promotion of the latter. The flow with the ratio recommended would be so slow as to break the spirit of ambitious and virile men.

A squadron as large as the one recommended should always be commanded by an officer of the experience and balance generally possessed by one who has attained the grade of captain.

I am, therefore, of the opinion that there should be a first and second captain for each squadron other than the depot and machine gun squadron, so as to provide at least one captain for it at all times. Detachments are inevitable. As a rule they should be made from the grade having the largest proportion for duty, and from officers of vigor, some experience, and balance. Captains, as a rule, possess these qualifications to a marked degree.

C. H. M.

Washington, D. C., *October 16, 1913.*

Individual remark by Lieut. Col. Foltz as to officers rendered surplus by proposed organization.

OCTOBER 18, 1913.

I see no reason to fear that if these officers are carried on a list for the Cavalry arm rather than as extra and unnecessary regimental officers they will be in danger of being elimintaed by Congress.

Under our system their services will always be necessary for detached detail, and there is no more reason to fear that they will be eliminated than there would be to fear the elimination of officers of Coast Artillery who are not on duty with batteries.

The board has given the regiments no unnecessary officers—every one is required with the regiment for duty, and if an individual should be required for special detached duty his place should be filled by another officer and he should be transferred to the unassigned list before he becomes available for use away from the regiment.

The French, after many years of carrying two captains for each squadron, one always detached, are abandoning that system as illogical and indirect and placing all these surplus officers on an unassigned list for the detached duty of the Cavalry arm.

FRED. S. FOLTZ,
Lieut. Colonel, Cavalry, General Staff.

WASHINGTON, D. C., *October 18, 1913.*

From: Lieut. Col. J. T. Dickman, Cavalry.
To: Recorder of the Cavalry Board.

The organization proposed in the preceding report contemplates an increase of about 200 enlisted men and a reduction of 1 major, 5 captains, and 2 lieutenants in each regiment of Cavalry.

Whatever compensatory efforts may be made and promises held out to protect our Cavalry officers from still greater stagnation in their careers, it seems inevitable that the enactment of this proposition, after consideration by the highest authorities and comparison with the other branches of the mobile army, will result in a loss of 120 Cavalry officers, namely, 15 majors, 75 captains, and 30 lieutenants. Aside from the depressing effect on an arm in which esprit de corps and pride of profession are highly important, it should be borne in mind that trained officers are our most valuable asset in case of war. The spirit of loyalty which animates our cavalry officers, never shown to better advantage than in the camp at Winchester, Va., last summer, would prompt them to accept this sacrifice cheerfully, could it be shown that it is necessary or even highly desirable. Such does not appear to be the case.

Our present organization is quite flexible and lends itself readily to a number of combinations, both in single and double rank. Our regimental organization of 12 troops, formed into three squadrons, dates from 1861, and the single rank was approved in the same year The change could not well be made during the period of operations, but after the war the tactics of 1841 were finally dropped, and our Infantry also adopted the cavalry formation and organization.

The 6-squadron regiment has been obsolescent in Europe for some time, and is now retained only by Russia and Austria for reasons of economy and conservatism. The countries most advanced in dismounted use of Cavalry, namely, Germany and England, have regiments of 4 and 3 squadrons, respectively.

The proposed organization does not admit of expansion. The units are at full strength in time of peace. As the utilization of reserves has been adopted as a principle in our military policy, the organization should be correspondingly elastic.

More than four months ago a suggestion was submitted for the adaptation of our present organization to double-rank units. Its application, without a numerical increase in the troop, would give us units almost identical with the squadrons of the Poinsett Tactics of 1841, which, like the one now proposed, was mainly a translation from the French.

While holding to the views expressed, and believing that revision of our own drill and organization would be better than adoption of the systems of foreign nations having different terrain and national characteristics, it is realized that instructions to the Cavalry Board require habitual formation in double rank. I therefore accept and subscribe to the proposition submitted by Capt. Parker, which places all our officers and utilizes as units of command the troop, squadron, battalion, and regiment.

J. T. DICKMAN,
Lieutenant Colonel, Cavalry.

WAR DEPARTMENT,
Washington, D. C., October 18, 1913.

From: Lieut. Col. J. T. Dickman, Cavalry, and Capt. Frank Parker, Eleventh Cavalry.
To: Brig. Gen. E. J. McClernand (retired), president Cavalry Board.
Subject: Reorganization of cavalry regiment.

1. Leave organization of regiment as it is. Increase number of enlisted men so as to have 81 per troop, and organize troop into two platoons of 40 men each plus the first sergeant.

2. For all *drill, march,* and *maneuver,* the captain's command, to be designated *squadron,* to be formed by combining two troops. Two squadrons to be a battalion, commanded by a major.

Three battalions to be a regiment.

3. Apply the tentative drill regulations and organization for squadron given therein to above-described regiment.

REASONS.

1. Our present organization lends itself perfectly to this scheme.

2. The number of the captain's commands (the most important unit of the Army) would not be decreased.

3. This scheme allows for expansion, as each troop can be filled to a squadron in time of war by adding the third and fourth platoon successively.

4. All possible advantages arising from the 6-squadron regiment are obtained by this system, while retaining the original organization, with the number of captain's commands undiminished, and providing for an absolutely necessary system of expansion.

5. Even if the very conservative request for 16 more privates to a troop be not granted, by combining two troops at the present strength of 65 men we can apply the proposed system to a 3-platoon squadron, and begin work to-morrow by an order from the War Department.

6. The difficulty arising from having two captains with such a squadron is entirely theoretical. With the present call for detached service the War Department will have no difficulty in arranging that only one captain remain with the squadron.

7. Under the proposed organization, the machine-gun troop should be commanded by one of the supply captains who now becomes available. The lieutenants to be detailed from the present squadron adjutants and quartermasters and the enlisted men from the troops.

8. The remaining squadron adjutants and quartermasters, when not needed for those positions, to be utilized as platoon commanders.

9. The utility of a depot squadron does not warrant a captain's unit being assigned to it in times of peace. The training of horses and recruits should be done by squadron or by regiment, under direction of colonel.

There should be no difficulty in having a system of depot squadrons ready to be put into practice at once upon the outbreak of war.

* * * * * * *

A six-squadron regiment will frequently maneuver in a body of four squadrons, as the two flank squadrons will be continually detached. Majors (by virtue of the regulations) will be given opportunities to handle the regiment, and should therefore be competent in handling both four and six squadron regiments.

The second captain, when present, will likewise be given frequent opportunities to handle the squadron.

Hence, the provision for the proposed expansion. Captains are trained to handle squadrons of four platoons, and majors battalions of four squadrons.

If a war breaks out the expansion of the Cavalry can take place successively by platoons as soon as the reserves and recruits and their horses are ready to take their places in ranks.

* * * * * * *

In our opinion the best possible organization for our Cavalry for our special needs would be to increase the enlisted force of each captain's command to 160, and provide for one captain and two lieutenants being present always. We believe that the battalion, or four-squadron unit, commanded by a major should be the fighting unit of Cavalry as it is of Infantry and Artillery, but this is not a practicable organization for peace.

The time will come, perhaps, when our country will need the amount of Cavalry that the above organization will require, and until then the six-squadron regiment of 12 troops forms the best compromise possible, in our opinion.

Conditions in our country demand an expandable organization for our Cavalry. The basis for such expansion must be the troop, with its officers, noncommissioned officers, administration and interior economy always ready.

With a six-squadron regiment of but six captains' commands we lose 50 per cent of our present number of captains' commands, and the resulting organization is unexpandable.

We can not afford to reduce anything in our small Cavalry, least of all the number of its most important unit, the captain's command.

To increase the size of this unit after a war breaks out is possible. To create a new unit that will be sufficient within the available time will probably be impossible.

The two important principles of this proposition are:

1. Retention of the number of captains' commands.
2. Adoption of system to expand these commands in time of war.

J. T. Dickman,
Lieutenant Colonel, Cavalry.
Frank Parker,
Captain, Eleventh Cavalry.

War Department,
Washington, October 20, 1913.

From: E. J. McClernand, brigadier general, United States Army, president of Cavalry Board.

To: The Adjutant General.

Subject: Supplementary report on Cavalry organization.

Referring to the report of the Cavalry Board on Organization, dated October 18, 1913, the following further general remarks and arguments are submitted:

1. In any reorganization attempted it is believed we should recognize the necessity for an increase of the enlisted strength on the peace footing. That now authorized will not permit of satisfactory training.

2. In reorganizing our Cavalry we should use every practicable means to make it ready in strength and efficiency to meet the first shock of war.

3. Our trained officers are the biggest asset the country possesses in the way of Cavalry, and because of the difficulty everywhere found in the training of this arm, as well as on account of its cost, it is highly important that these officers be utilized in their own branch; that is, along lines in which they have beem made experts through training and experience.

4. A reasonable flow of promotion among commissioned officers is absolutely essential to attaining the highest possible efficiency in any arm.

Taking the organization and enlisted strength of the regiment as recommended in the report of the board, that is, a regiment composed of six squadrons, a depot squadron, a machine-gun squadron, and a headquarters detachment, with a total enlisted strength of 1,040, the commissioned personnel of our Cavalry, practically as it exists to-day, can best be utilized by making 22 regiments. The organization about to be outlined will give a total war strength of 726 commissioned and 22,880 enlisted, as against 750 commissioned and 18,540 enlisted as provided for in our existing organization. It is believed that with a proper effort the time and conditions are now favorable to secure the organization suggested.

I would place 33 commissioned officers in the regiment instead of 42, as recommended by the board. The number in the different grades will be found under the head of "Proposed organization," page 12 of my report of February 20, 1913. The only changes to be noted will be the addition of one lieutenant for the machine-gun squadron (provided with four instead of two guns), and the elimination of the chaplain from the regimental strength, with the understanding that he will be carried with the chaplains in the Army. One lieutenant is given with the depot squadron, instead of two as recommended by the board (Oct. 18, 1913). The plan here suggested will give 19 lieutenants to the regiment. The assignment of the regimental officers in their several positions will be found in the table shown on page 13 of the report of February 20, mentioned above. One lieutenant is added to the machine-gun squadron. On the peace footing each squadron will have two platoon commanders who are not commissioned, who become war lieutenants during hostilities. (See pp. 13–15 of said report.)

The plan here presented will cause the following changes in the commissioned personnel required for regiments, viz:

Increase, 7 colonels and 7 lieutenants. Decrease, 1 major, 5 captains, and 32 lieutenants, 8 of whom would be at once promoted, thus leaving but 24 lieutenants to be absorbed. The annual saving in salaries to the Government will be about $11,000. There are at this date 26 colonels and 22 lieutenant colonels in the Cavalry.

If our Cavalry can not be maintained on a war footing, the enlisted strength of the squadron can be reduced to 123, giving platoons of 12 instead of 16 files. They can be quite conveniently handled under the tentative drill regulations. To pass from the peace to the war footing, we would then add—to the platoon 8 men (1 squad), to the squadron 32, to the regiment 192, and to the arm 4,724. The men required to pass from the peace to the war footing can be supplied from a reserve that we may reasonably hope to secure in the not distant future.

It is believed an adjutant and a supply officer should be given to each wing to assist the major if that portion of the regiment be detached. The subdivision of the regiment into two wings provides for a command of convenient size, between the squadron and regiment, for temporary detached service. The necessity for detachments of the said strength has frequently arisen in the field in the past and must arise in future wars. In this suggestion no intention to change the leadership imposed by the new regulations on the colonel in battle is contemplated.

Another plan for forming a six-squadron regiment has been offered, viz: To combine two troops to form a squadron, as was done in the Poinsett Drill Regulations of 1841. This plan will give a first and second captain and four lieutenants to each squadron, if none be detached. The enlisted strength suggested will be something over 15,000 men in the arm. To pass to the war footing it is proposed to practically double (progressively) the strength of the captains' commands (the troops). To secure so large an addition of enlisted men will, it is thought, require the addition of many who are wholly untrained. This large addition of recruits will renew the difficulties that have presented themselves in the past. The Regular Cavalry will be much weaker, in the early days of war when it is most needed, than in the first plan of organization presented. To drill and equip from ten to fifteen thousand cavalrymen will certainly require several months under the most favorable conditions. It is thought the correct view to hold about the Regular Army is that it should form the backbone of our first line of defense, ready to strike vigorously on the outbreak of war.

Two captains of independent units, associated as stated, were the cause of more or less friction under the Poinsett Regulations. There is likely to be unnecessary delay in forming the squadron, and there is an unnecessary duplication in time of peace of certain men—first sergeants, stable sergeants, cooks, guards, etc. If the men for the machine-gun squadron be taken from the troops, we continue a policy that is now quite generally condemned. This plan will, however, probably keep a captain with the squadron, something very much to be desired. It will perhaps enable the new Drill Regulations to be used without waiting for legislation. As a result of placing many lieutenants on detached service, so common in our service, the platoons will, under either plan, often be without lieutenants to command them. This suggests that even when two troops are combined to form a squadron certain noncommissioned officers should be especially trained as platoon commanders, for intelligent leadership is the soul of the tentative drill regulations. That additional officers are required in our Army to meet the demands for detached service is undoubtedly true. This necessity can best be met by increasing the total number of officers in the Army.

E. J. McClernand,
Brigadier General, U. S. Army, President Cavalry Board.

Appendix 8.

The following are extracts from the views of Gen. Hunt, who was Chief of the Artillery of the Army of the Potomac from September 5, 1862, until the close of the war:

"On assuming the command, I found the Artillery much disorganized. * * * The batteries were deficient in guns, in men and horses, and a number were wholly unserviceable from all these causes combined. Horses were taken from the baggage trains and men temporarily detailed from the Infantry."

Under date of August 1, 1863:

"The promotion of many of the old Artillery officers, and the invariable transfer which accompanied it to other duties, weakened the regular batteries exceedingly, and at the same time deprived the divisional Artillery of experienced commanders. * * * It will perhaps hardly be believed that for the command and management in their operations of the Artillery of the Army, consisting of 412 guns, 980 carriages, 9,453 men and officers, 8,544 horses, besides their large ammunition trains, there were but five field officers of Artillery in the Army, and from the scarcity of officers of inferior grades, these officers had miserably inefficient staffs. Add to this that there was no commander at all of the Artillery until a late period of the operations, and I doubt if the history of modern armies can exhibit a parallel instance of such palpable crippling of a great arm of the service in the very presence of a powerful enemy, to overcome whom would require every energy of all arms under the most favorable circumstances. It is not, therefore, to be wondered at that confusion and mismanagement ensued."

Under date of September 27, 1863, he writes as follows:

"* * * In my report of the Battle of Chancellorsville I took occasion to call attention to the great evils arising from the want of field officers for the Artillery. The operations of this campaign and especially the Battle of Gettysburg afford further proofs, if such were necessary, of the mistaken policy of depriving so important an arm of the officers necessary for managing it. In this campaign, for the command of 67 batteries (372 guns), with over 8,000 men, 7,000 horses, and all the matériel, and large ammunition trains, I had one general officer commanding the reserve, and but four field officers. * * *

"In the seven corps the Artillery of two were commanded by colonels, one by a major, three by captains, and one by a lieutenant taken from their batteries for the purpose. The two brigades of Horse Artillery attached to the Cavalry were commanded by captains, and there was one field officer in the reserve. The most of these commands in any other army would have been considered proper ones for a general office.* * *"

Under date of February 21, 1864, he says:

"The policy of depriving us of field and partially of company officers had injured the efficiency and doubled the labors of Artillery commanders. The Artillery in battle covers a great deal of ground, and requires more supervision than Infantry. * * * Without officers to supervise and direct them this is impracticable."

Gen. Hunt closes his final report, dated June 1, 1865, with these words:

"In my previous reports I have had occasion to call attention to the want of a proper proportion of field officers for the Artillery, and this I did especially in the reports on the battles of Gettysburg and Chancellorsville; and as there is no bureau nor other center of administration for it, I take this occasion to present the same subject in order that the results of our experience may not be lost. This is due to the reputation of the Artillery in this war, as well as the future interests of the service. At an early period of the war orders were given that the Field Artillery should be taken into the service only by single batteries "in order to save field officers," this while Infantry regiments of a single battalion were allowed four with their proper staffs. Why this policy, so contrary to that of all modern armies and so destructive to the efficiency of the most complicated of all arms of the service, was adopted, I am at a loss to discover. Its effects have been but too clear. Not only has the service suffered from the want of officers absolutely necessary to its highest efficiency and economy, but this system has stopped promotion in the Artillery, and as a consequence nearly every officer of promise, as well as of any distinction, has been offered that promotion in the Infantry, Cavalry, or Staff, which no amount of capacity, gallantry, or good conduct could secure for him in our arm. The result is that with a few marked exceptions in which officers were willing to sacrifice their personal advancement and prospect to their love of the arm the best and most distinguished of the officers of the Artillery accepted positions elsewhere or left the service in disgust as opportunities offered. The effects of this and of other errors of organization has been but too evident; the Artillery, although it has done much better than under the circumstances could have been expected or even hoped, has not attained that efficiency which was possible, and has failed to retain the preeminence it once held in our Army and in public estimation. The sacrifice of efficiency has been made at the expense of economy. I do not hesitate to say that the Field Artillery of this Army, although not inferior to any other in our service, has been from one-third to one-half less efficient than it ought to have been, whilst it has cost from one-third to one-half more money than there was any necessity for. This has been due principally to the want of proper organization which has deprived it of the experienced officers required for its proper command, management, and supervision, and is in no respect the fault of the Artillery itself."

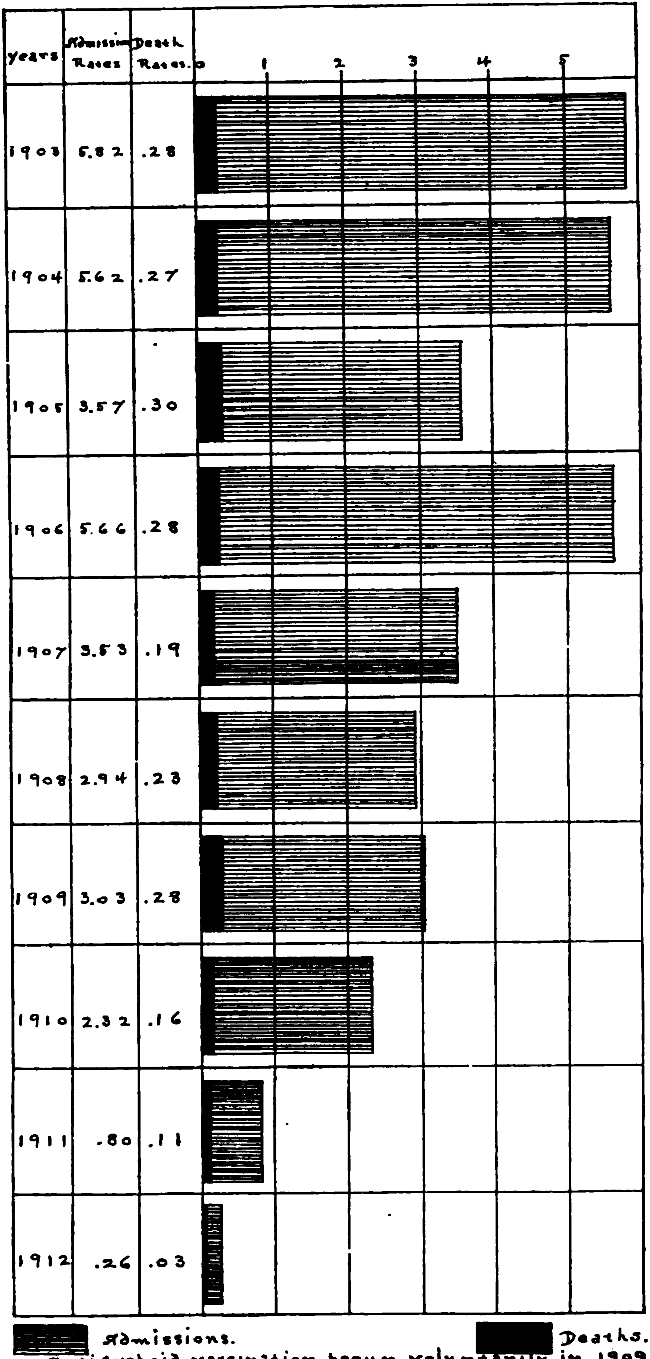
Unless Congress will take the action necessary to carry out the reorganization of our Army as proposed by military experts and give the increase in Field Artillery demanded by every military man, the defects and deficiencies experienced by Gen. Hunt will be repeated in our next war.

APPENDIX 9.

Chart P.

Typhoid Fever.
Admission and Death Rates.

Admission and Death Rates for Typhoid Fever for the United States, American Troops {Enlisted Men} years, 1903-1912.



Years	Admission Rates	Death Rates.
1903	5.82	.28
1904	5.62	.27
1905	3.57	.30
1906	5.66	.28
1907	3.53	.19
1908	2.94	.23
1909	3.03	.28
1910	2.32	.16
1911	.80	.11
1912	.26	.03

Anti-typhoid vaccination begun voluntarily in 1909 was made compulsory in 1911.

APPENDIX 10.

SEPTEMBER 19, 1913.

DEAR DOCTOR DRINKER: I have the honor to acknowledge receipt of your letter of August 20, inclosing copies of the circulars which you sent out concerning the college camps held during the past summer at Gettysburg, Pa., and Monterey, Cal., under special instructions of the Secretary of War.

I have also been informed by those in charge of the encouragement and assistance which you have given the undertaking by your personal example and effort, and I wish to express my appreciation.

I am very much interested in the successful working out of the idea of these college camps. I believe the students attending will derive not only a great deal of physical benefit from the healthful, open-air life, but also that they will benefit from the discipline, habits of regularity, and the knowledge of personal and camp sanitation which the experience in camp will give them.

The camps will also tend to disseminate sound information concerning our military history and the present policy of the Government in military matters, in addition to giving the young men themselves a very considerable amount of practical military instruction, which would be useful to them in case their services should ever be required.

Very sincerely, yours,

(Signed) WOODROW WILSON.

President H. S. DRINKER,
Lehigh University, South Bethlehem, Pa.

APPENDIX 11.

LEHIGH UNIVERSITY,
South Bethlehem, Pa., September 25, 1913.

To His Excellency WOODROW WILSON,
President of the United States.

MY DEAR MR. PRESIDENT: I have the honor to acknowledge receipt of your very welcome letter of the 22d instant, in which you express yourself so kindly in regard to such encouragement and assistance as it has been my privilege to give to the establishment of the college camps held this last summer under the direction of the War Department and the Chief of Staff.

I have been intensely interested in this movement, both because I think it is of enormous educational value to our young men, and because I also believe that it is a wise step in the direction of the maintenance of peace. I am and have been an earnest member of the Peace Association and I am also a member of the committee, by appointment of the governor of Pennsylvania, for the celebration of the one-hundredth anniversary of peace between English-speaking Nations; but it seems to me that our great nation, in taking the leadership, as we should do, in a movement for universal peace, can not do more wisely than, while avoiding the development of an undue spirit of militarism, to see that our citizens are prepared to maintain the Nation's rights without repeating the enormous and unnecessary sacrifice of blood and money that has been entailed by our unpreparedness in previous wars.

Sincerely, yours,

HENRY S. DRINKER,
President of Lehigh University.

APPENDIX 12.

CONSTITUTION OF THE SOCIETY OF THE NATIONAL RESERVE CORPS.

I. (1) Being convinced of the physical benefit to be derived from living a part of the year in the strenuous, healthful open-air life of a military camp, particularly to students, whose pursuits have kept them indoors and leading a comparatively inactive life for considerable periods, and the knowledge gained of marching, camping, care of the person and camp sanitation with minimum expense, and

(2) Desiring to increase the economic value and business efficiency of our young men by giving them an opportunity to study the principles of command, organization, and administration, and experience the value of discipline obtaining in modern armies, and

(3) Realizing that wars between nations are liable to occur now, or in the future, even as they have in the past, and

(4) That, notwithstanding our best efforts to preserve peace with right and honor, our own country may become involved in a war, either of defense against attack, or of offense against any nation that may violate the rights secured us under the Constitution, laws, and treaties of the United States, and

(5) Knowing the above and firmly believing that our present state of preparation and means of meeting such an emergency are inadequate, and will lead either to disaster or to useless waste of men, material, and money, and

(6) Further, knowing that the above state of affairs should be remedied, and realizing that it is each man's duty to his country to do his own proper share to effect such a remedy;

(7) We, the undersigned young men of America, do hereby form and organize the Society of the National Reserve Corps of the United States, and do hereby pledge ourselves, individually and collectively, from purely patriotic motives, to do our utmost without hope of reward and without fear or favor, to further the objects of said corps and work for its principles as set forth below:

II. The objects of the Society of the National Reserve Corps will be—

(*a*) To perpetuate the system of students' military instruction camps and to encourage a large attendance.

(*b*) To encourage thorough knowledge throughout the country of—

1. Military policy,
2. Military history, and
3. Military organization,

and to have these objects included in the curriculum of the various colleges.

(*c*) To individually train ourselves to the best of our ability to be fitted to serve with the best effect in case of need in such capacity as our condition at that time may properly permit.

(*d*) To establish and support a sound national military policy which shall include the maintenance of a highly efficient Regular Army sufficient for the peace needs of the Nation and a well-organized and efficient militia, each supported by adquate reserves.

III. Eligible for membership:

Class A.—Those men who have attended one or more students' military instruction camps as organized by the War Department.

Class B.—All other citizens of the United States in good standing, subject to rules and by-laws of the society.

President of society, H. S. Drinker, president of Lehigh University.

Student executive committee: H. A. Murrill, Virginia Military Institute; C. D. Gentsch, Western Reserve University; H. B. Perrin, Yale University (graduate); F. R. Lowell, Yale University; R. Guillou, University of California; G. H. Gaston, jr., Princeton University.

Advisory committee: J. G. Hibben, president Princeton University; A. L. Lowell, president Harvard University; A. T. Hadley, president Yale University; G. H. Denny, president University of Alabama; H. B. Hutchins, president University of Michigan; E. W. Nichols, president Virginia Military Institute; J. H. Finley, president College of the City of New York; B. I. Wheeler, president University of California; H. S. Drinker, president Lehigh University.

APPENDIX 13.

THE STUDENTS' MILITARY INSTRUCTION CAMP AT GETTYSBURG.

[Reprinted from the New York Times of August 17, 1913.]

When in May last I received the letter sent out by Gen. Leonard Wood, Chief of Staff of the United States Army, to the presidents of our American universities and colleges, stating that the Secretary of War had decided to hold during the following summer two experimental military camps of instruction for students of such institutions, I received the word with hearty appreciation of the immense good to our young men likely to result from such an establishment. Of all things that the American youth of to-day needs, and needs most, is the advantage resulting from an experience of rigorous, self-imposed discipline, and this would be self-imposed discipline, as the young men joining these camps would go of their own motion. Among young men there are especially two classes to whom such an experience would be most valuable—those coming from well-to-do indulgent parents, and those who, lacking parental control, have developed an independence of action not consistent in all respect with the proper conventions of society and life. Nothing could be better for these men or for any others of our youth than to be thrown together for a time in a body under the careful supervision of the splendid men to whom have been delegated the care and supervision of our boys in these camps—officers of the Army, devoted to the service of their country, gentlemen of high ideals, thorough training, and intensely and patriotically interested in the work. It is an enormous error to consider or look on these camps as training schools simply to develop a measure of military efficiency. No man has better expressed the great value of systematic military training than Price Collier in his "Germany and the Germans," where he gives the German system credit for far more in the national advancement than mere military preparedness. As he well says, "One can understand that Germany has little patience with the confused thinking which maintains that military training only makes soldiers and only incites to martial ambitions; when, on the contrary, she sees every day that it makes youths better and stronger citizens, and produces that self-respect, self-control, and cosmopolitan sympathy which more than aught else lessen the chance of conflict." * * * "Soldiers and sailors train themselves, and train others, first of all to self-control, not to war. It is a pity that 'compulsory service' has come to mean merely training to fight. In Germany, at any rate, it means far more than that. Two generations of Germans have been taught to take care of themselves physically, without drawing a sword. It is rather a puzzling commentary upon the growth of democracy that in America and in England, where most has been conceded to the majority, there is least inclination on their part to accept the necessary personal burden of keeping themselves fit, not necessarily for war, but for peace, by accepting universal and compulsory training."

Physical training, compulsory on all students in all classes, properly supervised by competent directors of physical education, is becoming the rule in our colleges for men and women, and we all recognize the immense advance that has been made in this respect in the development of healthy, strong-lunged, and strong-hearted youths and maidens, but the accentuation of physical training with a measure of military discipline and precision is a further great step in advance.

I have had the pleasure of visiting the instruction camp at Gettysburg and again the second camp for target practice, at Mount Gretna, to which the boys marched from Gettysburg, camping by the way, and learning practically how to care for themselves by day and by night while living in the open air. My interest in these visits was of course intensified by my desire to see our delegation of Lehigh students at the camps, and the fact that one of my own sons was there with my hearty approval and encouragement made the visits especially interesting to me personally. I could see nothing to criticize and everything to commend and admire. The camp arrangements, medical care, camp hospitals, shower baths, living tents, were perfect, and the food was excellent, all at small cost. The boys were carefully instructed in the principles of modern camp sanitation and the proper caring for and disposal of excreta and of waste from the kitchen; this is information of the highest importance, and is information that the average citizen never gets; the want of it has cost many precious lives not only in our Civil and Spanish Wars, but it is felt to-day in our citizen life. I slept on a cot, as the boys did, in the nights I spent at camp, and ate in their mess tent where the boys and officers met at meals. I was impressed with the cordiality and kindly intercourse between the officers and students and especially with the intense interest shown by the young men in all their exercises.

Rising at the call of the bugle at 5.15, they first had open air—setting up—gymnastics under the leadership of an officer. Then a good breakfast. Then, after a short rest, several hours of instruction in various open-air duties, ending with a lecture on some interesting subject from one of the officers in charge. The afternoons and evenings were devoted to voluntary exercises or to sports, at the option of the students. So keen were they for voluntary cavalry drill, fencing, broadsword practice, artillery drill, etc., that on one day I was there I heard the commandant give stringent directions to the officers in charge to lessen the amount of this voluntary work in the afternoon and force the young men to rest and recreation for a change. The camp is in fact a training school for manly men and good citizens with the best of good influences; regular work in the morning, voluntary engagements, baseball and other recreation, in the afternoon and evening, all of it ideally good thorough training, with healthful sport interspersed, careful but not oppressive supervision and regulation, absolutely healthful surroundings, and good associations. I can think of no six weeks that could be spent by our boys to better advantage to themselves and with better promise to our country of development of good manly men and gentlemen.

I found over 50 universities and colleges represented by student delegations, among them most of the leading institutions of the East. The western institutions of course sent their delegations to the other camp, established at the Presidio of Monterey, Cal., and I saw commendatory notes from the presidents of many institutions, from the leaders of education in our country, a unanimous expression from those best qualified in our land to form and express an opinion, of approval of the training proposed.

The country owes a great debt of gratitude to the men who devised and put into effect this experiment for the benefit of our youth, and it is greatly to be hoped that it may go on and be developed and enlarged to embrace in succeeding years as many of our young men as possible. Our university and college bred youths should develop as a class into leaders of our people; surely in their training nothing can be more valuable than this hard disciplinary experience in obedience and regular clean living, and if with it all, they gain some knowledge of the art of war, a citizen soldiery is not an armed camp, and if the optimistic doctrine of our extreme peace advocates is correct, that if driven to war we can rely on the patriotism and efficiency of our citizens, it may be well that those citizens have at least some appreciation of the rudiments of the duties to which they may be suddenly called. I come of Quaker stock and all my instincts are for peace, but I believe that peace will be the more assured to our beloved Nation if with prudence we learn to know our strength and to conserve it for our good and the good of the world, rather than rely on the present existence of a millennium that we pray will come in time but that to-day is not with us.

APPENDIX 14.

FLOODS OF MARCH AND APRIL, 1913, IN THE OHIO VALLEY.

1. According to the official records the floods of March and April, 1913, in the Ohio Valley, beginning March 23, 1913, were due to excessive precipitation over a comparatively large area, with the result that the rivers of northern Indiana and Ohio, especially the Miami, Scioto, and Muskingum, suddenly attained immense proportions, carrying with them disaster and ruin, and assisted by the eastern and southern tributaries of the Ohio, caused the high stages of the flood in the Ohio from Marietta to Cairo.

2. On the Ohio River the rise was extremely rapid from March 25 to 29, at all points above Louisville, Ky., the crest passing the latter city April 1, and finally passing into the Mississippi about April 8, 1913.

3. Telegrams to President Wilson from points in Ohio, advising that unparalleled floods were causing terrific distress, that many thousands were homeless and at the point of starvation, and that food, clothing, and money were immediately needed to relieve distress, were referred to the War Department, with instructions to render every possible assistance.

4. On the afternoon of March 26, 1913, Maj. Normoyle and Maj. Logan, Quartermaster Corps, United States Army, were ordered to proceed by first train to Columbus, Ohio, reporting by telegraph to the governor of Ohio, to take charge of Government relief work in that section of the country.

At the same time tentage, cots, stoves, blankets, and 300,000 rations were ordered shipped by express from the Philadelphia, St. Louis, Jeffersonville, and Chicago depots of the Quartermaster Corps, consigned to Maj. Normoyle at Columbus, Ohio, with a view to establishing a depot of supply at that point.

5. The officers of the Quartermaster Corps assigned to this duty were authorized to call on purchasing officers at the various quartermaster depots, or to purchase in open market at the most convenient points such supplies as might be required to take care of the situation, as they found it. Signal Corps supplies, with wireless equipment, etc., for use in the flood zone, were also ordered shipped, by express, to Chillicothe and Columbus, Ohio.

6. Maj. Normoyle was assigned in general charge of relief work, with instructions to conduct the work on the general lines followed in the Mississippi River relief work the year before.

7. The Chief of Engineers directed that all engineer officers in the flooded districts cooperate in relief work with their boats, barges, and other engineer plant.

8. Officers and noncommissioned officers from available points, such as Columbus Barracks, Ohio, Fort Thomas, Ky., Fort Porter, N. Y., and Fort Sheridan, Ill., were ordered to proceed to the various stricken points in the flooded area.

Medical officers, hospital corps men with complete field hospitals, large quantities of medical supplies of all kinds, vaccine points, typhoid prophylactic, spinal meningitis antitoxin, surgical dressings in large quantities, emergency medical supplies of other kinds, etc., were at once ordered shipped to Columbus and Cincinnati, Ohio.

9. The Navy Department dispatched officers and train loads of supplies, consisting of rations, clothing, medical supplies, etc., which, upon arrival at Columbus, Ohio, were diverted to Marietta, Ohio and Louisville, Ky., at which points three floating bases were fitted out, using steamboats and barges belonging to the engineering equipment, with naval officers in charge of supplies.

10. Upon arrival at Cincinnati, Ohio, Maj. Logan assumed charge of Government relief in Cincinnati, Hamilton, and Ohio River points, while Maj. Normoyle proceeded to Columbus, Ohio, at which point general headquarters and general base for relief work were first established.

11. Owing to the seriousness of the situation the honorable, the Secretary of War, the Chief of Staff, and certain staff officers, left on March 27, 1913, by special train for the flood zone.

11½. After inspections in Cincinnati, Hamilton, Dayton, and other points, the honorable, the Secreatry of War, and the Chief of Staff arrived in Columbus on March 31, 1913, returning to Cincinnati the same day. Maj. Rhoades was designated by the Secretary of War as sanitary officer at Dayton, Ohio.

12. Prior to the departure of the Secretary of War and the Chief of Staff for Washington instructions were given as to the policy to be pursued and the methods adopted in connection with relief work in the Ohio Valley; and also the Mississippi Valley, which was now calling for help.

13. With a view to coordination and prevention of waste and to insure more efficient service, telegrams were sent from Knoxville, Tenn., by the honorable, the Secretary of War, to the governors of Ohio, Illinois, West Virginia, Missouri, Tennessee, Arkansas, Kentucky, Mississippi, Louisiana, and Indiana, asking cooperation and requesting that some one responsible head in each State be designated with whom all local appeals in the various States could be made, and through whom requests should be made upon the department through its representative in charge of the relief work.

14. In the various towns in the Ohio Valley the officers of the Medical Corps, in cooperation with the State and local boards of health, were actively engaged in a campaign of sanitation. How well they performed their duty in the Ohio Valley, as well as the Miami, Scioto, and Muskingum, and later in the Mississippi, is a matter of record.

15. Relief districts were established in Columbus, Cincinnati, and Dayton, Ohio; Louisville and Hickman, Ky.; Memphis, Tenn.; Helena, Ark.; Vicksburg, Miss., and Baton Rouge, La., with subbases at Greenville and Natchez, Miss.

Crevasses occurred in the Mississippi Valley at Wilson's Landing, Randomshot, and Graves Bayou, Ark., Mayersville, Miss., the east bank of the Atchafalaya, near Melville, La., and Lake John, La., necessitating much rescue work, especially at Graves Bayou, Mayersville, and Lake John. Although the stage of the water was practically the same as last year, the people in the valley profited by their previous experiences, which necessitated less extensive relief and rescue work.

The approximate amount expended from regular appropriations in connection with the relief work was $660,000, which amount was covered by urgency deficiency bill.

On April 14, 1913, the personnel consisted of—Army, 29 officers and 111 enlisted men; Navy, 7 officers and 1 paymaster clerk; Marine Corps, 2 officers and 7 enlisted men.

J. E. NORMOYLE,
Maj. Q. M. Corps.

PERSONNEL.

On April 14, 1913, the following officers and noncommissioned officers of the Army, Navy, and Marine Corps and clerks of the Quartermaster Corps were on duty in the flooded districts: Maj. James E. Normoyle, Quartermaster Corps, in general charge relief work; George F. Unmacht, clerk, Quartermaster Corps, chief clerk.

First district, Columbus, Ohio.—Capt. Hilden Olin, Quartermaster Corps; Sergt. Peter W. Wey, Quartermaster Corps; Sergt. William J. Walker, Quartermaster Corps; Sergt. Eber I. Sharp, Quartermaster Corps.

Medical Corps —Maj. P. C. Fauntleroy, Medical Corps.

Second district, Cincinnati, Ohio.—Capt. L. E. Hanson, Ninth Infantry; R. G. Wood, clerk, Quartermaster Corps; Geo. F. Holmes, clerk, Quartermaster Corps; Sergt. Chas. A. Shankle, Ninth Infantry; Corpl. Robert E. Baker, Ninth Infantry.

Third district, Dayton, Ohio.—Maj. T. L. Rhoades, Medical Corps, chief sanitary officer; Capt. E. M. Leary, Cavalry; Second Lieut. W. B. Robb, Twenty-ninth Infantry; Sergt. Charles B. Wickins, Quartermaster Corps; Sergt. Wilbur H. Towle, Twenty-ninth Infantry; Sergt. Charles F. Dyer, Recruit Depot, Columbus Barracks; Sergt. Gustav Haas, Recruit Depot, Columbus Barracks; Corpl. John W. Emerson, Twenty-ninth Infantry; Corpl. William T. Neal, Recruit Depot, Columbus Barracks; Corpl. Mathew O'Connor, Recruit Depot, Columbus Barracks; Pvt. Peter Blake, Recruit Depot, Columbus Barracks; Pvt. Ben Brackett, Recruit Depot, Columbus Barracks; Pvt. Chas. Schimmell, Recruit Depot, Columbus Barracks; Pvt. Wilkie Clark, Recruit Depot, Columbus Barracks; Pvt. William Cameron, Recruit Depot, Columbus Barracks; Pvt. William M. Williams, Recruit Depot, Columbus Barracks.

Medical Corps (Personnel, Hospital Corps on duty, Dayton, Ohio).—Capt. George P. Peed, commanding; Capt. Arthur W. Shaley, executive officer; Capt. John S. Lambie, quartermaster; Capt. Morrison C. Stayer, commissary officer; Sergt. John H. Butler, Sergt. William S. Washburn, Sergt. Emil Ellingsen, Sergt. Hugh D. Johnson, Sergt. Robert L. Edwards, Sergt. Setherton J. Scott, Sergt. Alexander Hepburn, Corpl. John Fitzgerald, Corpl. Samuel Gatling, Lance Corpl. Frank Wagner, Asst. Cook Freemont G. Hunt, Asst. Cook John McDonald, Pvt. (First Class) James W. Baskett, Pvt. (First Class) Edward E. Bohl, Pvt. (First Class) Mayer Cigal, Pvt. (First Class) George H. Fry, Pvt. (First Class) Lee C. Hayes, Pvt. (First Class) Charles F. LaDue, Pvt. (First Class) William E. Olson, Pvt. (First Class) Charles L. Williamson, Pvt. (First Class) John Woodcock, Pvt. Hiram J. Aldridge, Pvt. Jay L. Bainter, Pvt. James L. Barnett, Pvt. Chauncey Berkheimer, Pvt. Nelson N. Blosso, Pvt. William C. Burcham, Pvt. Omer A. Couturs, Pvt. Smith L. Curtiss, Pvt. Arthur A. Davies, Pvt. Homer E. Drummond, Pvt. William A. Ganster, Pvt. James E. Garrity, Pvt. Joseph Gregory, Pvt. James Grinberg, Pvt. John A. Grondin, Pvt. James W. Hill, Elmer E. James, Pvt. Timoleon Jost, Pvt. Ike Kaplan, Pvt. Robert Kenney, Pvt. Oscar B. Poindexter, Pvt. Samuel S. Rosenweig, Pvt. Harry Smith, Pvt. Thomas Wilson, Pvt. Gustav Yaeckel.

Marine Corps, Dayton, Ohio.—Capt. D. P. Hall, First Lieut. Alexander H. Watson, Gunner Sergt. Charles E. Clark, Sergt. Jacob Lienhard, Sergt. Joseph H. Davis, Sergt. Fred L. Gillig, Sergt. W. A. Roache, Pvt. John H. Kelley, Pvt. James Martin,

Fourth District, Louisville, Ky.—Capt. Howard G. Davids, Ninth Infantry; Sergt. John R. Hubbard, Quartermaster Corps; Sergt. Francis Christian, Eighth Infantry; J. E. Rudolph, clerk, Quartermaster Corps.

Navy.—Surg. S. G. Evans, United States Navy.

Evansville, Ind.—Capt. William K. Naylor, Ninth Infantry; Corpl. Verne C. Carr, Ninth Infantry; Corpl. John R. Morgan, Ninth Infantry.

S. S. "Kentucky".—P. A. Surg. W. Chambers, United States Navy; Paymaster F. T. Watrous, United States Navy.

S. S. "Guyandot."—P. A. Paymaster L. N. Wertenbaker, United States Navy.

S. S. "Greendale."—P. A. Surg. R. Cuthbertson, United States Navy.

Fifth district, Hickman, Ky.—Capt. G. H. McMaster, Third Infantry; William Kaercher, clerk, Quartermaster Corps; Corpl. James A. Gilbert, Ninth Infantry.

Wickliffe, Ky.—Sergt. Harry C. McDonnell, Ninth Infantry.

Columbus, Ky.—Sergt. Henry Ross, Ninth Infantry.

Dyersburg, Tenn.—Sergt. Frank L. Dulligan, Ninth Infantry.

Medical Corps.—Maj. W. J. L. Lyster, Medical Corps.

Caruthersville, Mo.—Col. A. Oliver, Missouri National Guard, in charge, district from Point Pleasant, Mo., to Osceola, Ark.

Sixth district, Memphis, Tenn.—Lieut. W. E. Holliday, Seventeenth Infantry; Lieut. Allen M. Burdett, Seventeenth Infantry; Sergt. J. W. Black, Quartermaster Corps; Sergt. Henry Bruch, Eleventh Cavalry; Corpl. W. P. Blackwell, Ninth Infantry; Corpl. Lloyd Kemper, Ninth Infantry; Corpl. G. J. Sperry, Ninth Infantry.

Medical Corps.—Maj. S. W. Wadhams, Medical Corps; Maj. P. C. Hutton, Medical Corps.

Navy.—Paymaster D. W. Nesbit, United States Navy; Pay Clerk J. M. Cornell, United States Navy.

On board engineer steamer "Gen. William R. King."—Second Lieut. S. B. Buckner, jr., Ninth Infantry; Sergt. William Remington, Ninth Infantry; Sergt. John R. Platt, Ninth Infantry; Corpl. Lewis O. Jeffers, Ninth Infantry.

On board engineer steamer "Scioto."—Sergt. Thomas A'Hearn, Service School Detachment No. 1; Sergt. Peter Farrell, Ninth Infantry.

On board engineer steamer "Nokomis."—W. J. Allen, clerk, Quartermaster Corps; John Dvorak, packer, Quartermaster Corps; Louis Lottridge, Quartermaster Corps.

Seventh district, Helena, Ark.—Capt. H. M. Bankhead, Seventeenth Infantry; Lieut. Henry A. Finch, Engineer Corps; Capt. H. L. Jackson, retired; Lieut. John H. Hester, Seventeenth Infantry; Charles L. Dulin, clerk, Quartermaster Corps; Sergt. C. H. Kunz, Quartermaster Corps; Sergt. William C. Hunt, Eleventh Cavalry; Sergt. Arthur W. Lear, Service School Detachment No. 1; Sergt. Robert Harrison, Seventeenth Infantry; Corpl. O'Neal Chaver, Ninth Infantry; Corpl. Harry Sarah, Ninth Infantry; Corpl. Walter M. Williams, Ninth Infantry.

Eighth district, Vicksburg, Miss.—Capt. William B. Baker, Quartermaster Corps; Sergt. Edward McCormick, Eleventh Cavalry.

Signal Corps.—Lieut. W. A. Blain, Signal Corps; 20 enlisted men of Signal Corps.

Greenville, Miss.—Lieut. Edwin L. Cox, Eleventh Cavalry; Sergt. Edward Miller, Quartermaster Corps.

Ninth district, Baton Rouge, La.—Maj. James A. Logan, jr., Quartermaster Corps; Capt. J. E. Gaujot, First Cavalry; Frank J. Butler, inspector of supplies, Quartermaster Corps; H. H. Peters, inspector, Engineer Corps; Sergt. O. B. Mullihan, Ninth Infantry; Sergt. J. A. Styer, Ninth Infantry.

Navy.—Paymaster J. S. Beecher, United States Navy.

REPORT OF THE ADJUTANT GENERAL.

REPORT OF THE ADJUTANT GENERAL.

War Department,
The Adjutant General's Office,
October 18, 1913.

To the honorable the Secretary of War:

This report relates generally to the fiscal year ended June 30, 1913, but where extension beyond the fiscal year tends to continuity and completeness of data such extension has been made. The report relates to the organization and operations of the Army, as shown by reports and correspondence of record in this office. It also relates to the business of the office as a bureau of the War Department.

While the Philippine Scouts are by law included in the strength of the Army, the military statistics hereafter presented relate to the Regular Army only unless it is specifically indicated in any case that the Philippine Scouts are included.

AUTHORIZED STRENGTH OF THE ARMY.

The authorized strength of the entire military establishment on July 1, 1912, not including the Hospital Corps, was 4,812 officers and 81,409 enlisted men in the Regular Army and 180 officers and 5,732 enlisted men in the Philippine Scouts, a total of 4,992 officers and 87,141 enlisted men. The authorized strength on July 1, 1913, not including the Hospital Corps or the enlisted strength of the Quartermaster Corps, with the exception of 403 quartermaster sergeants, was 4,763 officers and 84,810 enlisted men in the Regular Army and 180 officers and 5,732 enlisted men in the Philippine Scouts, a total of 4,943 officers and 90,542 enlisted men.

It will be seen from the foregoing statement that there was a net decrease of 49 officers and a net increase of 3,401 enlisted men in the authorized strength of the Regular Army and that there was no change in the authorized strength of the Philippine Scouts during the year covered by this report.

The decrease in the number of officers of the Regular Army was the result of an increase of 1 officer in the Judge Advocate General's Department under the provisions of the act of Congress approved March 2, 1913 (37 Stat. L., 708); an increase of 12 officers in the Corps of Engineers under the provisions of the act of Congress approved February 27, 1911 (36 Stat. L., 957); a decrease of 40 officers in the Quartermaster Corps under the provisions of the act of Congress approved August 24, 1912 (37 Stat. L., 952); a decrease of 11 in the number of officers of the Medical Reserve Corps assigned to active duty under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66); and a decrease of 11 in the number of additional officers authorized by the act of Congress approved March 3, 1911 (36 Stat. L., 1058).

The increase of 3,401 in the authorized enlisted strength resulted from an increase in strength of certain organizations stationed outside the continental limits of the United States, directed in General Orders, No. 19, War Department, March 3, 1913, together with some minor changes made from time to time pursuant to War Department general orders.

The authorized strength of the military establishment on June 30, 1913, by branches of service, is shown in the following table:

Branches of service.	Officers.	Enlisted men.	Total.
General officers	21	....	21
Adjutant General's Department	23	....	23
Inspector General's Department	17	....	17
Judge Advocate General's Department	13	....	13
Quartermaster Corps	183	403	586
Medical Department	608	....	608
Corps of Engineers	225	1,942	2,167
Ordnance Department	85	735	820
Signal Corps	46	1,212	1,258
Bureau of Insular Affairs	3	....	3
Cavalry	825	14,144	14,969
Field Artillery	269	5,457	5,726
Coast Artillery Corps	765	18,607	19,372
Infantry	1,641	33,107	34,748
Porto Rico Regiment of Infantry	32	591	623
United States Military Academy detachments	7	630	637
Recruiting parties, recruit depots, and unassigned recruits	....	7,000	7,000
United States Military Prison guards	....	320	320
Service-school detachments	....	587	587
Indian scouts	....	75	75
Total Regular Army	4,763	84,810	89,573
Philippine Scouts	180	5,732	5,912
Aggregate	4,943	90,542	95,485

The authorized enlisted strength does not include the Hospital Corps (3,500 men), which, under the act of Congress approved March 1, 1887 (24 Stat. L., 435), is not to be counted as a part of the enlisted strength of the Army.

The authorized enlisted strength shown in the foregoing table includes the 403 quartermaster sergeants of the Quartermaster Corps authorized by law. It does not include the enlisted strength (6,000 men) of the Quartermaster Corps, which, under the provisions of the act of Congress approved August 24, 1912 (37 Stat. L., 593), is "not to be counted as a part of the enlisted force provided by law."

The authorized number of officers shown in the preceding table includes 103 first lieutenants of the Medical Reserve Corps assigned to active duty under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66).

ACTUAL STRENGTH OF THE ARMY.

The actual strength of the entire military establishment on June 30, 1913, was 4,665 officers and 75,321 enlisted men in the Regular Army and 180 officers and 5,403 enlisted men in the Philippine Scouts, making a total of 4.845 officers and 80,724 enlisted men. The figures here given for the enlisted men of the Army do not include 3,419 enlisted men of the Hospital Corps (Medical Department) or 3,047 enlisted men of the Quartermaster Corps.

On June 30, 1912, the actual strength of the entire military establishment, not including the Hospital Corps, was 4,470 officers and 77,835 enlisted men in the Regular Army and 180 officers and 5,480 enlisted men in the Philippine Scouts, making a total of 4,650 officers and 83,315 enlisted men.

The following table shows the actual strength of the Army on June 30, 1913, by branches of service:

Branches of service.	Officers.	Enlisted men.	Total.
General officers	19	....	19
Staff corps and departments	[1] 1,007	[2] 2,332	3,339
Engineers	201	1,649	1,850
Cavalry	788	13,685	14,473
Field Artillery	262	4,763	5,025
Coast Artillery Corps	748	16,628	17,376
Infantry	1,640	30,034	31,674
Miscellaneous	....	6,230	6,230
Total Regular Army	[1] 4,665	[2] 75,321	79,986
Philippine Scouts	180	5,403	5,583
Aggregate	[1] 4,845	[2] 80,724	85,569

[1] Including 103 first lieutenants of the Medical Reserve Corps on active duty.
[2] Not including 3,419 enlisted men of the Hospital Corps and 3,047 enlisted men of the Quartermaster Corps.

COMPARISON OF AUTHORIZED AND ACTUAL STRENGTH.

The following table shows in convenient form the actual and the authorized strength of the military establishment on June 30, 1913, and June 30, 1912, not including the Hospital Corps, and including only quartermaster sergeants of the enlisted strength of the Quartermaster Corps, together with the increases and decreases during the year and the number of vacancies on each of those dates:

	Regular Army.			Philippine Scouts.			Total.		
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.
Authorized strength:									
June 30, 1913	4,763	84,810	89,573	180	5,732	5,912	4,943	90,542	95,485
June 30, 1912	4,812	81,409	86,221	180	5,732	5,912	4,992	87,141	92,133
Increase during year	[1] 49	3,401	3,352	......	......	......	[1] 49	3,401	3,352
Actual strength:									
June 30, 1913	4,665	75,321	79,986	180	5,403	5,583	4,845	80,724	85,569
June 30, 1912	4,470	77,835	82,305	180	5,480	5,660	4,650	83,315	87,965
Decrease during year	[2] 195	2,514	2,319	......	77	77	[2] 195	2,591	2,396
Vacancies:									
June 30, 1913	98	[3] 9,489	[3] 9,587	......	329	329	98	[3] 9,818	[3] 9,916
June 30, 1912	342	3,574	3,916	......	252	252	342	3,826	4,168

[1] Decrease. [2] Increase. [3] Includes allowance for unassigned recruits.

It will be seen from the foregoing table that while there was an increase in the authorized enlisted strength during the year ended June 30, 1913, there was a decrease in the actual enlisted strength. It appears from the foregoing table that on June 30, 1913, there were 9,489 vacancies in the authorized enlisted strength of the Regular Army. This, however, is not a correct figure, because the authorized enlisted strength of the Regular Army includes an allowance of not to exceed 4,770 enlisted men to provide for an accumulation of unassigned recruits in case all the organizations should be filled at any time to their authorized strength. None of this allowance for unassigned recruits should be considered in calculating the number of vacancies. Excluding from the calculation this allowance for unassigned recruits, it appears that there were approximately 4,700 vacancies in the authorized enlisted strength in addition to the 329 vacancies in the Philippine Scouts.

PHILIPPINE SCOUTS.

No change was made during the past fiscal year in the organization or the authorized strength of the Philippine Scouts. The total authorized strength of the Philippine Scouts is 180 officers and 5,732 enlisted men. They are organized into 12 battalions of 4 companies each and 4 independent companies, a total of 52 companies of enlisted natives of the Philippine Islands.

GEOGRAPHICAL DISTRIBUTION OF TROOPS.

The geographical distribution of the Army on June 30, 1913, is shown in the following table:

Geographical distribution.	Officers.	Enlisted men.	Total.
In the United States	3,680	59,549	63,229
In Alaska	53	1,129	1,182
In the Philippines:			
Regular Army	446	11,209	11,655
Philippine Scouts	180	5,403	5,583
In China	41	1,211	1,252
In Porto Rico	33	646	679
In Hawaii	271	6,768	7,039
In the Isthmian Canal Zone	51	868	919
Troops en route and officers at other foreign stations	90	407	497
Total	4,845	87,190	92,035

The foregoing table includes 3,419 enlisted men of the Hospital Corps, distributed as follows: United States, 2,434; Alaska, 46; Philippines, 679; Porto Rico, 18; Hawaii, 144; Isthmian Canal Zone, 17; China, 36; en route, 45; and 3,047 enlisted men of the Quartermaster Corps, distributed as follows: United States, 2,489; Alaska, 31; Philippines, 233; Porto Rico, 43; Hawaii, 206; Isthmian Canal Zone, 16; China, 9; en route, 20. The table also includes 103 first lieutenants of the Medical Reserve Corps on active duty.

GEOGRAPHICAL DIVISIONS AND DEPARTMENTS.

The geographical divisions and departments established for purposes of military administration July 1, 1911, by General Orders, No. 64, War Department, 1911, were discontinued February 15, 1913. By General Orders, No. 9, War Department, February 6, 1913, the territory of the United States and its possessions was reorganized into geographical commands, as follows:

The Eastern Department.—Embracing the New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi, the post of Fort Logan H. Roots, Ark., the Coast Artillery subdistricts of New Orleans and Galveston, the Panama Canal Zone, and the island of Porto Rico with the islands and keys adjacent thereto; headquarters at Governors Island, N. Y.

The Central Department.—Embracing the States of Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, Missouri, Kansas, Nebraska, Wyoming (except that part included in the Yellowstone Park), Colorado, and the post of Fort Missoula, Mont.; headquarters at Chicago, Ill.

The Southern Department.—Embracing the States of Texas (except the Coast Artillery subdistrict of Galveston), Louisiana (except the Coast Artillery subdistrict of New Orleans), Arkansas (except the post of Fort Logan H. Roots), Oklahoma, New Mexico, and Arizona; headquarters at Fort Sam Houston, Tex.

The Western Department.—Embracing the States of Washington, Oregon, Idaho, Montana (except the post of Fort Missoula), so much of Wyoming as includes Yellowstone Park, California, Nevada, Utah, and Alaska; headquarters at San Francisco, Cal.

The Philippine Department.—Embracing all the islands of the Philippine Archipelago. This department is subdivided territorially into the district of Luzon, comprising the islands formerly included in the department of Luzon, and the district of Mindanao, comprising the islands formerly included in the department of Mindanao; headquarters at Manila, P. I.

The Hawaiian Department.—Embracing the Hawaiian Islands and their dependencies; headquarters at Honolulu, Oahu.

Provision was also made in the general order of February 6, 1913, before referred to, for the tactical organization of the troops of the mobile Army into divisions and brigades.

CHANGES OF STATIONS OF TROOPS.

The following tables show the movement of troops to and from the insular possessions, and changes of stations of troops within the continental limits of the United States during the fiscal year ended June 30, 1913:

Movements of troops on transports to and from the insular possessions.

Transport.	Left—		Arrived at—		Troops on board.
	Place.	Date.	Place.	Date.	
Thomas	Manila, P. I.	1912. July 15	San Francisco, Cal	1912. Aug. 13	Third Battalion, Ninth Infantry.
Logan	San Francisco, Cal	1913. Jan. 6	Honolulu, Hawaii	1913. Jan. 14	Headquarters and First and Second Battalions, Twenty-fifth Infantry.
Sheridan	do	do	do	do	Fourth Cavalry and Third Battalion, Twenty-fifth Infantry.
Do	Honolulu, Hawaii.	Jan. 17	San Francisco, Cal.	Jan. 25	Fifth Cavalry.
Thomas	San Francisco, Cal.	May 24	Honolulu, Hawaii.	May 31	Company E, Signal Corps.
Sheridan	do	Jan. 6	do	Jan. 14	Tenth, Sixty-eighth, and Seventy-fifth Companies, Coast Artillery Corps.
Sherman	do	May 6	do	May 14	Fifty-fifth Company, Coast Artillery Corps.
Thomas	do	May 24	do	May 31	One hundred and fourth and One hundred and forty-third Companies, Coast Artillery Corps.

Changes of stations of troops within the United States.

Organization.	Left—		Arrived at—	
	Place.	Date.	Place.	Date.
Headquarters and First Battalion, Ninth Infantry.	San Francisco, Cal.[1]	1912. July 11	Fort Thomas, Ky	1912. July 18
Second Battalion, Ninth Infantry.	.....do.[1]	...do....	Fort Snelling, Minn	Do.
One hundred and forty-first Company, Coast Artillery Corps.	Fort McHenry, Md	July 20	Fort Strong, Mass	July 21
Third Battalion, Ninth Infantry.	San Francisco, Cal.[1]	Aug. 13	Fort Sill, Okla	Aug. 19
Thirteenth Company, Coast Artillery Corps.	Fort Winfield Scott, Cal	Nov. 25	Fort Miley, Cal	Nov. 25
Troops I and L, Fourth Cavalry.	Fort Apache, Ariz.[2]	Dec. 29	San Francisco, Cal	1913. Jan. 4
Second and Third Battalions, Twenty-fifth Infantry.	Fort George Wright, Wash.[2]	Dec. 31	.....do	Jan. 3
Seventy-fifth Company, Coast Artillery Corps.	Fort Morgan, Ala.[2]	...do....	.....do	Jan. 5
Headquarters and First Battalion, Twenty-fifth Infantry.	Fort Lawton, Wash.[2]	1913. Jan. 1	.....do	Jan. 4
Headquarters, Troops A, B, C, D, E, F, G, H, L, and M, Fourth Cavalry.	Fort Huachuca, Ariz.[2]	Jan. 2	.....do	Do.
First Battalion, Fourteenth Infantry.	Fort Lincoln, N. Dak	Jan. 4	Fort George Wright, Wash.	Jan. 7
Tenth Company, Coast Artillery Corps.	Fort Winfield Scott, Cal.[2]	Jan. 5	San Francisco, Cal	Jan. 5
Sixty-eighth Company, Coast Artillery Corps.	Fort Baker, Cal.[2]	...do....	.....do	Do.
Headquarters and Second Battalion, Fourteenth Infantry.	Fort Wm. H. Harrison, Mont.	Jan. 15	Fort Lawton, Wash	Jan. 15
First Battalion, Eighteenth Infantry.	Whipple Barracks, Ariz	Feb. 11	Fort Missoula, Mont	Feb. 15
Third Battalion, Ninth Infantry.	Fort Sill, Okla	Feb. 12	Fort Logan H. Roots, Ark.	Feb. 13
Third Battalion, Fourth Infantry.	Fort Logan H. Roots, Ark.	...do....	Fort Snelling, Minn	Feb. 14
Second Battalion, Ninth Infantry.	Fort Snelling, Minn	Feb. 11	Fort Thomas, Ky	Feb. 13
Third Battalion, Fourteenth Infantry.	Fort Missoula, Mont	Feb. 14	Fort George Wright, Wash	Feb. 14
Second Battalion, Nineteenth Infantry.	Fort Sheridan, Ill	Feb. 15	Fort Sill, Okla	Feb. 17
Third Squadron, First Cavalry.	Boise Barracks, Idaho	Feb. 14	Presidio of Monterey, Cal.	Do.
Fifty-fifth Company, Coast Artillery Corps.	Fort Du Pont, Del.[2]	Apr. 28	San Francisco, Cal	May 3
One hundred and fourth and One hundred and forty-third Companies, Coast Artillery Corps.	Fort Washington, Md.[2]	May 17	.....do	May 23
Headquarters, Troops A, B, C, D, and F, Fifth Cavalry.	San Francisco, Cal.[3]	Jan. 26	Fort Huachuca, Ariz	Jan. 28
Troops G, I, K, and M, Fifth Cavalry.	.....do.[3]	...do....	.....do	Jan. 29
Troops H and L, Fifth Cavalry.	.....do.[3]	...do....	Fort Apache, Ariz	Feb. 1

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[1] En route from Philippine Islands. [2] En route to Hawaii. [3] En route from Hawaii.

The foregoing table does not show practice marches, temporary changes of station, or movements of troops along the Mexican border.

TROOPS SERVING OUTSIDE THE CONTINENTAL LIMITS OF THE UNITED STATES.

The exchange of regiments between the United States and the island possessions which was inaugurated when the Philippine Islands were first garrisoned by troops of the Regular Army was definitely abandoned in February, 1912. Since that date certain regiments and other organizations have been designated as permanent garrisons for the Philippines, and a tour of service there and in the Hawaiian Islands for all officers and for the noncommissioned officers of the staff corps has been established at three years, when they are replaced by individuals selected by roster from those serving in the United States. Enlisted men who do not desire to reenlist are brought home and replaced by recruits from the United States.

The troops serving outside the continental limits of the United States are as follows:

PHILIPPINE DEPARTMENT.

Seventh Cavalry, Eighth Cavalry.
Second Field Artillery.
Eleventh, Eighteenth, Twenty-third, Forty-second, Seventieth, Eighty-sixth, Ninetieth, Ninety-fifth, One hundred and thirty-eighth, and One hundred and forty-second Companies, Coast Artillery Corps.
Eighth Infantry, Thirteenth Infantry, Fifteenth Infantry (headquarters, band, First and Third Battalions detached in China), Twenty-fourth Infantry.
Two companies of Engineers.
Two companies Signal Corps.
One field hospital and ambulance company.

HAWAIIAN DEPARTMENT.

Fourth Cavalry.
First Field Artillery.
Tenth, Fifty-fifth, Sixty-eighth, Seventy-fifth, One hundred and fourth, One hundred and fifth, One hundred and forty-third, and One hundred and fifty-ninth Companies, Coast Artillery Corps.
First Infantry, Second Infantry, Twenty-fifth Infantry.
One company of Engineers.
One company Signal Corps.

CANAL ZONE.

Tenth Infantry.

The Thirtieth Infantry and two companies of the Signal Corps are stationed in Alaska.

The designation of permanent regiments for Philippine service at increased strength enabled the withdrawal of two regiments of Cavalry and four regiments of Infantry from that service and, although the total strength of the garrison there remained as formerly, resulted in a material reduction in the number of officers required for that service.

SECOND LIEUTENANTS APPOINTED.

During the year ended June 30, 1913, 296 second lieutenants were appointed to the Army. The following table shows the sources from which the appointments were made and the corps or arms of the service to which the appointees were assigned:

Source from which appointed.	Assigned to—					
	Engineers.	Cavalry.	Coast Artillery Corps.	Field Artillery.	Infantry.	Total.
United States Military Academy	15	41	37	13	81	187
Enlisted men, United States Army		4	1	1	9	15
Civil life	1	23	19	7	44	94
Total	16	68	57	21	134	296

Of the 94 appointed from civil life shown in the preceding table, 7 were graduates of the United States Naval Academy. Of the latter 1 was assigned to the Field Artillery arm and 6 to the Coast Artillery Corps. One civilian appointed to the Coast Artillery Corps and one civilian appointed to the Infantry arm declined the commissions.

Since June 30, 1913, the close of the fiscal year, 31 second lieutenants have been appointed, 4 in the Coast Artillery Corps and 27 in the mobile Army. Four of these appointees are graduates of the United States Naval Academy, 13 are former enlisted men of the Army, and 14 are from civil life.

After these appointments were made there remained but 2 vacancies in the grade of second lieutenant in the line of the Army—both in the Coast Artillery Corps.

COMMISSIONED OFFICERS IN ACTIVE SERVICE.

On June 30, 1913, there were 4,665 commissioned officers on the active list of the Army. Of these, 1,227 (including 66 chaplains) were general officers or officers of the Staff Corps and departments, 788 belonged to the Cavalry, 262 to the Field Artillery, 748 to the Coast Artillery Corps, and 1,640 to the Infantry.

Of the 1,227 general and staff officers, 1,065 were present for duty, 47 on leave, 12 absent sick, and 103, including officers detailed on the General Staff, on detached duty. Of the 3,438 line officers, 2,617 were present for duty, 132 on leave, 41 absent sick, 647 on detached duty, and 1 in arrest.

From the foregoing it appears that 23.88 per cent of the line officers and 13.20 per cent of the general and staff officers were absent from their commands. At the close of the preceding fiscal year 27.01 per cent of the line officers and 10.10 per cent of the general and staff officers were so absent.

In addition to the officers on the active list, there were 100 retired officers under assignment to active duty on June 30, 1913, as is more fully shown elsewhere in this report.

ADDITIONAL OFFICERS.

The Army appropriation act approved March 3, 1911 (36 Stat. L., 1058), authorizes the promotion up to and including the grade of colonel, in the discretion of the President and subject to examination as prescribed by law, of line officers on the active list below the grade of colonel who have lost in lineal rank through the system of regimental promotion in force prior to October 1, 1890. It is provided that officers advanced to higher grades under the law cited shall be "additional officers" in those grades.

At the close of the fiscal year there had been 66 advancements in grade (41 to the grade of colonel and 25 to that of lieutenant colonel) under the act of March 3, 1911, before cited. The table following shows the grades to which, and the arms in which, those advancements were made.

Arm of service.	From lieutenant colonel to colonel.	From major to lieutenant colonel.	Total.
Cavalry	16	14	30
Field Artillery	2		2
Coast Artillery Corps	6	2	8
Infantry	17	9	26
Total	41	25	66

Of the 66 advancements shown in the foregoing table, 20 were advancements in the cases of 10 officers who were advanced to the grade of lieutenant colonel, and subsequently to that of colonel; 11 of the officers advanced were retired from active service prior to June 30, 1913; 2 died; 4 were promoted lineally and ceased to be "additional officers"; 1 was appointed a brigadier general, leaving 38 additional officers in service June 30, 1913. Of these, 13 were in the Cavalry arm, 2 in the Field Artillery arm, 6 in the Coast Artillery Corps, and 17 in the Infantry arm.

All of the officers promoted had already reached the grade of major. The 25 majors advanced to be additional lieutenant colonels left a like number of vacancies in the grade of major, which caused the promotion to the next higher grade of the same number of captains, first lieutenants, and second lieutenants. Of the 41 lieutenant colonels, 31 left vacancies in the grade of lieutenant colonel, and caused the promotion to the next higher grade of the same number of majors, captains, first lieutenants, and second lieutenants. The 10 additional lieutenant colonels who were advanced to be additional colonels did not make any vacancies in the grade of lieutenant colonel.

OFFICERS ON DETACHED SERVICE.

As in preceding years, a relatively large number of officers were absent from their commands on detached service. On June 30, 1912, there were 5.82 per cent of the general officers and officers of the staff corps and departments and 21.29 per cent of the line officers on detached service. On June 30, 1913, those percentages were 8.39 for general and staff officers and 18.81 for officers of the line. Officers detailed on the General Staff are included in those percentages.

The character of duty performed by the officers of the Army on detached service on June 30, 1913, the numbers so detached, and their rank and branches of service are shown in the table following.

Duty and branches of service from which detached.	Rank.								
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.
The General Staff:									
General officers	2	2							4
Staff departments			1		1	1			3
Cavalry				3	2	3			8
Field Artillery			1	1					2
Coast Artillery Corps				1	3	2			6
Infantry			2	1	5	6			14
Total	2	2	4	6	11	12			37
With the General Staff:									
Field Artillery						1			1
Coast Artillery Corps			1			1			2
Total			1			2			3
Army War College:									
General officers		1							1
Staff departments		1	1	1	4				7
Cavalry				2	5				7
Coast Artillery Corps			2						2
Infantry				3	5				8
Total		2	3	6	14				25
United States Military Academy:									
Staff departments					2	9	7		18
Cavalry					1	3	10	7	21
Field Artillery							5	2	7
Coast Artillery Corps			1				23		24
Infantry					2	2	21	6	31
Total			1		5	14	66	15	101
Army Service Schools, Fort Leavenworth, Kans.:									
Staff departments				2	4	4			10
Cavalry					3	8	1		12
Field Artillery					1	3			4
Coast Artillery Corps						3			3
Infantry				1	4	15	2	2	24
Total				3	12	33	3	2	53
Artillery School, Fort Monroe, Va.:									
Coast Artillery Corps					3	10	37		50
Mounted Service School, Fort Riley, Kans.:									
Cavalry			1			4	9	9	23
Field Artillery							4	1	5
Total			1			4	13	10	28
School of Fire for Field Artillery, Fort Sill, Okla.:									
Field Artillery						1	3		4
Engineer School, Washington Barracks, D. C.:									
Staff departments						1	7	2	10
School of Musketry, Fort Sill, Okla.:									
Cavalry						1			1
Infantry			1				1	1	3
Total			1			1	1	1	4
At schools in Europe:									
Cavalry						1		1	2
Instructors at civil educational institutions:									
Cavalry						1	11	1	13
Coast Artillery Corps						1	2		3
Infantry				1		3	35	1	40
Total				1		5	48	2	56

Duty and branches of service from which detached.	Rank.								
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.
Recruiting service:									
Cavalry			2	1	1	8	14		26
Field Artillery			1	1		1	7		10
Coast Artillery Corps			1	1		7	13		22
Infantry			2	2	2	14	28		48
Total			6	5	3	30	62		106
Aides-de-camp:									
Cavalry						1	6		7
Field Artillery							1	1	2
Coast Artillery Corps							1		1
Infantry						2	3	2	7
Total						3	11	3	17
With Philippine government:									
Staff departments						1			1
Field Artillery								1	1
Cavalry					1	2			3
Infantry				1	3				4
Total				1	4	3		1	9
With Cuban government:									
Field Artillery					1				1
With Isthmian Canal Commission:									
Staff departments			4	5	5	3	2		19
Cavalry						2	2		4
Coast Artillery Corps				1					1
Infantry						2			2
Total			4	6	5	7	4		26
Military attachés:									
Staff departments			1	1	2				4
Cavalry			1		1	2			4
Field Artillery				1	1		1		3
Coast Artillery Corps					1	1			2
Infantry			1		1	1			3
Total			3	2	6	4	1		16
With Philippine Scouts:									
Cavalry						4			4
Infantry						8			8
Total						12			12
In bureaus of War Department:									
Staff departments					2				2
Cavalry					1				1
Field Artillery					1				1
Coast Artillery Corps					6	1			7
Infantry				1	1				2
Total				1	11	1			13
At department headquarters:									
Cavalry			3	2		3	1		9
Field Artillery							1		1
Coast Artillery Corps					3				3
Infantry			1	2	1	2	1		7
Total			4	4	4	5	3		20
At the military prisons:									
Staff departments				1					1
Cavalry						1	1		2
Field Artillery							1		1
Coast Artillery Corps							2		2
Infantry			1				6		7
Total			1	1		1	10		13

Duty and branches of service from which detached.	Rank.								
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.
With militia:									
Staff departments						1			1
Cavalry					3	3	5		11
Field Artillery						5	6		11
Coast Artillery Corps				1		9			10
Infantry			2	3	9	13	23		50
Total			2	4	12	31	34		83
Alaskan Road Commission:									
Staff departments							1		1
Infantry				1			1		2
Total				1			2		3
Office Engineer Commissioner, District of Columbia:									
Staff departments					1	2			3
Superintendent State, War, and Navy Building:									
Staff departments						1			1
Office Public Buildings and Grounds:									
Staff departments					1				1
Infantry							1		1
Total					1		1		2
With Signal Corps:									
Staff departments						1		1	2
Cavalry							1	2	3
Field Artillery						1			1
Coast Artillery Corps							4	2	6
Infantry							4	3	7
Total						2	9	8	19
Special duty abroad:									
Staff departments					1				1
Cavalry						2	2		4
Coast Artillery Corps						1			1
Total					1	3	2		6
Members of boards:									
Staff departments					2	2			4
Cavalry			1	1					2
Field Artillery			1						1
Coast Artillery Corps					2				2
Total			2	1	4	2			9
With Porto Rico Regiment:									
Cavalry					1				1
Infantry						2			2
Total					1	2			3
Special duty:									
Staff departments					1	2	2		5
Cavalry				2		1	1		4
Coast Artillery Corps						1			1
Total				2	1	4	3		10
With American Red Cross:									
Staff departments					1				1
United States Soldiers' Home:									
Staff departments						2	1		3
Superintendent of National Parks (acting):									
Cavalry				1					1

RECAPITULATION.

Rank.	General officers and officers of staff corps and departments.	Cavalry.	Field Artillery.	Coast Artillery Corps.	Infantry.	Total.
Major general	2	....	....	....	....	2
Brigadier general	4	....	....	....	....	4
Colonel	7	8	3	5	10	33
Lieutenant colonel	10	12	3	4	16	45
Major	27	19	4	18	33	101
Captain	30	50	12	37	70	199
First lieutenant	20	64	29	82	126	321
Second lieutenant	3	20	5	2	15	45
Total	103	173	56	148	270	750
Percentage	8.39	21.96	21.37	19.78	16.46	16.08

It will be seen from the foregoing table that of the 647 line officers on detached duty, 512, or 79.1 per cent, were captains or lieutenants. Of the 688 line officers on detached duty June 30, 1912, 572, or 83.1 per cent, were captains or lieutenants.

The act of Congress approved March 3, 1911 (36 Stat. L., 1045), provides for the detachment of 200 officers from their proper commands for duty with the Organized Militia, or for other duty, the usual period of which exceeds one year. The officers detached under the law before cited leave vacancies which are to be filled in the same manner as vacancies caused by the details of officers for service in staff departments. It has been found convenient, for the purposes of administration, to carry these detached officers on one list, and they are commonly known as "Detached officers."

The following table shows, by grades and arms of service, the number of officers detached from their proper commands June 30, 1913, under the provisions of the act of Congress approved March 3, 1911:

Arms of service.	Grades.					
	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Total.
Cavalry	2	2	6	18	19	47
Field Artillery	....	1	2	6	6	15
Coast Artillery Corps	2	2	6	17	17	44
Infantry	4	4	13	36	37	94
Total	8	9	27	77	79	200

The character of employment of those officers, by grades, on June 30, 1913, is shown in the following table:

Character of duty.	Grades.					
	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Total.
With Organized Militia of 42 States	1	2	5	24	19	51
On other than militia duty	7	7	22	53	60	149
Total	8	9	27	77	79	200

RETIRED OFFICERS ON ACTIVE DUTY.

On June 30, 1913, there were 100 retired officers under assignment to active duty. The following table shows the grades and employment of those officers:

Duty.	Lieutenant general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.
At the Soldiers' Home	1				1	1			3
On recruiting service			1	6	8	17	6		38
With State militia			2	2	6	12			22
At Army Service Schools, Fort Leavenworth, Kans.				1					1
At Army War College			1						1
In charge of Indian prisoners					1				1
On college duty			1		10	13	5	1	30
Doorkeeper to President					1				1
Member of Cavalry Board		1							1
Military attaché			1		1				2
Total	1	1	6	9	28	43	11	1	100

Of the retired officers on duty, as shown in the foregoing table, 1 lieutenant general, 1 major, and 1 captain (all at the United States Soldiers' Home in this city) receive from the United States only the retired pay of their respective grades; 6 colonels and 9 lieutenant colonels receive the pay and allowances that a retired major would receive under a like assignment; and 27 majors, 42 captains, 11 first lieutenants, and 1 second lieutenant receive the active pay and allowances of their respective grades.

OFFICERS EXAMINED FOR PROMOTION.

During the fiscal year 363 officers of the Army were examined, and 3 were reexamined, for promotion.

Of the 363 officers examined, 352 were found qualified, and 10 were found professionally disqualified; 6 of the latter were suspended from promotion, 3 will be suspended as vacancies occur after the close of the fiscal year, and 1 was honorably discharged under the provisions of the act of Congress approved April 23, 1908 (35 Stat. L., 66). One officer examined and found physically disqualified is to be retired when entitled to promotion.

Of the 3 officers who were reexamined, 1 was found qualified and 2 were found professionally disqualified and were honorably discharged.

One officer promoted during the fiscal year 1911, subject to examination, was examined during the past fiscal year and found qualified.

RETIRED OFFICERS.

On June 30, 1912, there were 1,017 commissioned officers on the retired list. During the fiscal year ended June 30, 1913, 73 officers were placed on the retired list, 59 of those on that list died and 1 was dismissed, leaving 1,030 officers of the Army on the retired list

June 30, 1913. The following table shows the grades of the officers on the retired list and causes of retirement of those officers:

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	After reaching 62 years of age (sec. 1244, R. S.).	On own application.		For disability.				After failure to pass second professional examination (act of Mar. 3, 1909).	Under special acts of Congress.	Total.
					In line of duty.			Not in line of duty (sec. 1252, R. S.).			
			After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	Section 1251, Revised Statutes.	With increased rank (acts of Oct. 1, 1890, Apr. 23, 1908, and Mar. 3, 1909).	With full rank of command when wounded (act of July 28, 1866).				
Lieutenant general	2	......	2	......	......	......	......	......	......	......	4
Major general	14	......	7	1	......	......	1	......	......	......	23
Brigadier general	86	12	85	23	19	......	2	......	......	2	229
Colonel	48	3	28	39	21	......	1	......	......	......	140
Lieutenant colonel	22	......	6	33	20	17	......	......	......	1	99
Major	10	......	1	47	90	43	3	......	3	2	199
Captain	6	......	......	14	117	45	......	3	......	5	190
First lieutenant	1	......	......	......	69	22	......	2	......	1	95
Second lieutenant	......	......	......	......	21	......	......	1	......	2	24
Chaplain:											
Lieutenant colonel	3	......	......	......	......	......	......	......	......	......	3
Major	5	......	......	......	11	......	......	......	......	......	16
Captain	4	......	......	......	3	......	......	......	......	......	7
First lieutenant	......	......	......	......	1	......	......	......	......	......	1
Total	201	15	129	157	372	127	7	6	3	13	1,030

Of the 7 officers who were retired under section 32 of the act of Congress approved July 28, 1866 (14 Stat. L., 337), on account of disability occasioned by wounds received in battle, with the full rank of the command held by them at the time such wounds were received, 2 were advanced three grades, 2 two grades, and 3 one grade. All of them, with the exception of the major general and 1 brigadier general, received a further advancement of one grade under the act of Congress approved April 23, 1904 (33 Stat. L., 264). In addition to these, 83 brigadier generals, 18 colonels, 41 lieutenant colonels, 73 majors, 20 captains, and 4 first lieutenants hold their present grades on the retired list through an advancement of one grade under the act of Congress approved April 23, 1904, making a total of 246 officers on the retired list June 30, 1913, who have been advanced one grade under that act because of service during the Civil War.

The table following shows, by grades, the number of officers of the Army retired from active service during the fiscal year ended June 30, 1913, and the causes of their retirement.

Grades.	By operation of law, 64 years of age (act of June 30, 1882).	After reaching 62 years of age (sec. 1244, R. S.).	On own application.		For disability.		Under special acts of Congress.	Total.
			After over 40 years' service (act of June 30, 1882).	After over 30 years' service (sec. 1243, R. S.).	Incident to the service (sec. 1251, R. S.).	Preventing promotion (acts of Oct. 1, 1890, and Apr. 23, 1908).		
Brigadier general	5	....	2	....	1	....	....	8
Colonel	7	3	5	3	3	....	....	21
Lieutenant colonel	2	....	1	6	2	....	....	11
Major	1	....	....	5	2	1	1	10
Captain	....	....	....	....	10	2	....	12
First lieutenant	....	....	....	....	5	....	....	5
Second lieutenant	....	....	....	....	2	....	1	3
Chaplain:								
Major	1	....	....	....	....	....	....	1
Captain	....	....	....	....	1	....	....	1
First lieutenant	....	....	....	....	1	....	....	1
Total	16	3	8	14	27	3	2	73

From the foregoing table it will be seen that 73 officers of the Army were placed on the retired list during the fiscal year ended June 30, 1913. During the preceding year 63 officers were placed on that list.

Commencing with cadets who entered the United States Military Academy subsequent to passage of the act of Congress approved August 24, 1912 (37 Stat. L., 594), service as cadets will not count for retirement of officers.

COMMISSIONED OFFICERS WHO HAD CIVIL WAR SERVICE.

The official records show that of the 4,665 commissioned officers on the active list of the Regular Army June 30, 1913, only one, Col. John L. Clem, Quartermaster Corps, served in the Army, Navy, or Marine Corps during the Civil War otherwise than as a cadet, prior to April 9, 1865. .

There were 1,030 officers of the Army on the retired list June 30, 1913. Of these, 419 served in the Army, Navy, or Marine Corps otherwise than as cadets, prior to April 9, 1865. The following table shows, by grades, the number of officers on the retired list of the Army June 30, 1913, and the number of those officers that had Civil War service otherwise than as cadets, prior to April 9, 1865:

Grades.	Officers on the retired list June 30, 1913.		
	Total.	Civil War service.	No Civil War service.
Lieutenant general	4	4	....
Major general	23	21	2
Brigadier general	229	195	34
Colonel	140	26	114
Lieutenant colonel	99	44	55
Major	199	82	117
Captain	190	29	161
First lieutenant	95	6	89
Second lieutenant	24	....	24
Chaplain:			
Lieutenant colonel	3	3	....
Major	16	9	7
Captain	7	....	7
First lieutenant	1	....	1
Total	1,030	419	611

It will be seen from the foregoing table that over 40 per cent of the officers of the Army on the retired list June 30, 1913, served as officers or enlisted men of the Army, Navy, or Marine Corps during the Civil War. On June 30, 1912, nearly 45 per cent of the officers of the Army on that list had Civil War service.

RETIRED ENLISTED MEN.

On July 1, 1912, there were 3,424 enlisted men on the retired list created by the provisions of the act of Congress approved February 14, 1885 (23 Stat. L., 305), modified by the acts of Congress approved September 30, 1890 (26 Stat. L., 504), March 2, 1907 (34 Stat. L., 1218), and August 24, 1912 (37 Stat. L., 575).

During the fiscal year 326 enlisted men were placed on the retired list and 161 of the men on that list died, leaving 3,589 enlisted men on the retired list at the close of the year, June 30, 1913.

PERSONS QUALIFIED TO HOLD VOLUNTEER COMMISSIONS.

Certificates were issued during the past fiscal year, under the provisions of section 23 of the act of Congress approved January 21, 1903 (32 Stat. L., 779), in the cases of 11 persons who were found upon examination by boards of officers convened for that purpose to be "specially qualified to hold commissions in any volunteer force which may hereafter be called for and organized under the authority of Congress, other than a force composed of Organized Militia." Of these, 1 was from Porto Rico, 1 from Alabama, 2 from Illinois, 1 from Tennessee, and 1 from Indiana, and 5 were noncommissioned officers of the Army.

From the date of the enactment of the law cited to June 30, 1913, only 79 certificates of qualification to hold commissions in the volunteer forces have been issued.

OFFICERS OF THE ARMY DETAILED AT CIVIL EDUCATIONAL INSTITUTIONS.

The laws and regulations governing the detail of officers to civil educational institutions as professors of military science and tactics are published in General Orders, No. 231, War Department, November 16, 1909. Under those laws and regulations 87 officers (54 on the active list and 33 on the retired list) were serving as professors of military science and tactics on June 30, 1912. On June 30, 1913, 86 officers (56 on the active list and 30 on the retired list) were thus on duty.

Under the provisions of the order before cited, the institutions, not exceeding 10 in any year, whose students have exhibited the greatest application and proficiency in military training and knowledge are to be designated as "distinguished institutions," and the President has authorized the announcement that an appointment as second lieutenant in the Regular Army will be awarded annually to an honor graduate of each of those institutions. The "distinguished institutions" for the past year, announced in Bulletin No. 20, War Department, June 12, 1913, are as follows, arranged alphabetically:

Agricultural and Mechanical College of Texas, College Station, Tex.
Culver Military Academy, Culver, Ind.
New Mexico Military Institute, Roswell, N. Mex.

Norwich University, Northfield, Vt.
Pennsylvania Military College, Chester, Pa.
St. John's Military Academy, Delafield, Wis.
St. John's School, Manlius, N. Y.
Shattuck School, Faribault, Minn.
The Citadel, Charleston, S. C.
Virginia Military Institute, Lexington, Va.

STRENGTH AND LOSSES OF THE ARMY.

The tables facing show (A) the strength of the Army of the United States June 30, 1912, and June 30, 1913, with losses from all causes between those dates; (B) the strength and losses from all causes in the Army in each month of the fiscal year; (C) the strength of the Army, by divisions and departments, at the end of each month of the fiscal year; and (D) the number of deaths in the Army during the fiscal year.

The losses in the Army during the year ended June 30, 1913, are summarized in the following statement:

REGULAR ARMY.

Officers:		
Killed in action or died of wounds, disease, etc	22	
Resigned or discharged	67	
Dismissed	6	
Retired	73	
		168
Enlisted men:		
Killed in action or died of wounds, disease, etc	398	
Discharged upon expiration of term of service	12,095	
Discharged for disability, by sentence of court-martial, or by order	8,063	
Deserted	4,451	
Retired	342	
		25,349
Aggregate		25,517

Wounded, 10 enlisted men.

PHILIPPINE SCOUTS.

Officers:		
Killed in action or died of wounds, disease, etc	2	
Resigned or discharged	8	
Dismissed	1	
		11
Enlisted men:		
Killed in action or died of wounds, disease, etc	40	
Discharged upon expiration of term of service	471	
Discharged for disability, by sentence of court-martial, or by order	85	
Deserted	3	
		599
Aggregate		610

Wounded, 2 officers and 34 enlisted men.

B.—TABLE SHOWING THE MONTHLY STREN

	Strength.				
	Officers.	Enlisted men.	Total.	Retired.	Resigned or dis-charged.
REGULAR ARMY.					
July, 1912	4,566	81,608	86,174	1	
August, 1912	4,560	81,568	86,128	7	
September, 1912	4,576	81,308	85,884	10	
October, 1912	4,559	81,045	85,604	5	
November, 1912	4,563	80,587	85,150	3	
December, 1912	4,549	80,353	84,902	4	
January, 1913	4,537	80,648	85,185	2	
February, 1913	4,524	80,947	85,471	10	
March, 1913	4,586	81,256	85,842	10	
April, 1913	4,572	81,298	85,870	10	
May, 1913	4,559	81,466	86,025	7	
June, 1913	4,665	81,787	86,452	4	
Total	....	....	....	73	

....	1	....	3	....	2	5	21	320	....	....
....	1	....	....	....	....	....	51	233	....	....
....	3	1	....	....	....	8	67	219	....	....
....	7	1	1	....	1	15	9	191	....	....
....	1	....	....	....	1	3	76	190	....	....
....	9	4	....	2	....	8	3	251	....	....
....	6	....	....	....	....	6	52	476	....	....
....	1	2	1	....	....	5	36	225	....	....
....	1	....	....	2	....	1	62	392	....	....
....	4	1	1	....	1	5	51	221	....	....
....	2	2	....	2	....	4	139	330	....	....
....	2	1	1	....	1	8	140	284	....	....
....	5	....	....	1	....	3	60	206	....	....
....	1	2	....	....	....	1	46	146	....	....
....	8	....	1	....	1	15	4	244	....	....
....	3	....	2	....	1	3	18	393	....	....
....	4	1	2	....	1	5	52	469	....	....
....	2	2	....	1	....	2	56	287	....	....
....	1	....	1	....	....	....	85	285	....	....
....	5	1	....	1	1	2	66	482	....	....
....	2	....	....	1	....	2	5	187	....	....
....	....	2	....	....	....	....	1	150	....	....
....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....
....	86	27	16	15	11	135	1,511	8,255	....	3
....	3	1	....	....	....	13	20	217	....	....
....	....	1	....	....	....	....	....	12	....	....
....	34	....	2	4	1	14	334	1,966	....	....
....	37	2	2	4	1	27	354	2,195	....	....
1	225	71	33	41	25	342	4,451	25,349	....	10
1	14	1	....	1	2	....	3	599	2	34
2	239	72	33	42	27	342	4,454	25,948	2	44

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ded by law." (37 Stat. L., 593.)
part of the enlisted strength of the Regular Army. (24 Stat. L., 435.)

1			3							66		
1			1							54		
										61		
9			2			1				66		
5				1			1			54		
			2							31		
1	5	1	2						1	49	1	14
1			1						1	32		
			1				1			47		
2	1									39		1
1			1							39		
	15		1						1	61	1	19
21	21	1	14	1		1	2		3	599	2	34
299	23	2	239	72	33	42	27	342	4,454	25,948	2	44

F EACH MONTH OF THE FISCAL YEAR.

	February, 1913.		March, 1913.		April, 1913.		May, 1913.		June, 1913.	
	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.
	1,020	21,940	1,003	21,916	1,009	21,845	996	21,815	996	21,662
	207	3,678	201	3,644	198	3,635	191	3,584	196	3,534
	388	6,831	420	6,970	421	6,798	414	6,910	422	6,822
	629	12,198	632	12,357	633	12,276	630	12,008	635	11,854
	261	5,004	265	4,973	264	5,031	259	5,398	271	6,768
ion..	494	10,419	501	10,412	534	10,947	539	11,009	517	10,770
	451	11,219	465	11,138	443	11,290	460	11,347	446	11,209
	180	5,461	179	5,439	180	5,427	180	5,427	180	5,403
	38	1,189	41	1,185	41	1,245	42	1,234	41	1,211
	1,036	8,469	1,058	8,661	1,029	8,231	1,028	8,161	1,141	7,957
	4,704	86,408	4,765	86,695	4,752	86,725	4,739	86,893	4,845	87,190

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a Embracing troops at camps, en route, recruits, etc.

JULY 1, 1912, AND JUNE 30, 1913.

uicide.		Murder or homicide.		Total.	
rs.	Enlisted men.	Officers.	Enlisted men.	Officers.	Enlisted men.
	37		18	18	319
	1				4
			2	1	5
					2
			1	1	12
	1	1	4	1	39
	2				13
				1	4
	41	1	25	22	398
	1		2	2	40
	42	1	27	24	438

AGGREGATE.

Officers:		
Killed in action or died of wounds, disease, etc	24	
Resigned or discharged	75	
Dismissed	7	
Retired	73	
		179
Enlisted men:		
Killed in action or died of wounds, disease, etc	438	
Discharged upon expiration of term of service	12,566	
Discharged for disability, by sentence of court-martial, or by order	8,148	
Deserted	4,454	
Retired	342	
		25,948
Aggregate		26,127

Wounded, 2 officers and 44 enlisted men.

It appears from the foregoing table that 12,095 enlisted men of the Regular Army were discharged upon expiration of term of service during the fiscal year ended June 30, 1913. During the preceding fiscal year the number of discharges upon expiration of term of service was 21,187, and during the fiscal year 1911 it was 27,042. These numbers are, respectively, 11.3, 18.6, and 24.6 per cent of the whole number of enlisted men in service or of enlistment contracts in force during each of those years.

The losses from all causes other than expiration of term of service among enlisted men of the Regular Army during the fiscal year ended June 30, 1913, numbered 13,254. During the preceding fiscal year those losses were 11,252, and during the fiscal year 1911 they were 9,426. Those numbers are, respectively, 12.4, 9.9, and 8.6 per cent of the whole number of enlistment contracts in force during each of those years.

DESERTIONS.

As shown by the official returns, the number of desertions from the Army during the fiscal year ended June 30, 1913, aggregated 4,451, which is 4.15 per cent of the whole number of enlistment contracts in force during the year. The number of desertions during the past year is 1,040 greater than the number in 1912, and 1,947 greater than in 1911.

Of the cases of reported desertion during the year, the charge was declared erroneous in 273, 2 of the men were tried and acquitted of the charge, and 596 were tried and found guilty of the lesser offense of absence without leave, making a total of 871 cases improperly classed as desertions. If this number be deducted from the 4,451 desertions shown on the returns, there remain 3,580 cases, or 3.34 per cent, of actual desertions of enlisted men from the Army during the year. Because of the relatively small changes that would result, and because of the extended examination of records that would be necessary to ascertain the branches of service to which the 871 men erroneously reported as deserters belonged, and the periods during which their reported desertions occurred, those cases have not been excluded in calculating the percentages shown in the tables in this report relative to desertions.

A comparison of the percentages of desertions in each of the past 20 years is shown in the following table:

Fiscal years.	Percentage deserted.	Fiscal years.	Percentage deserted.
1913	4.15	1903	7.10
1912	3.00	1902	5.00
1911	2.28	1901	4.12
1910	3.66	1900	4.09
1909	4.97	1899	3.22
1908	4.59	1898	1.57
1907	5.62	1897	3.13
1906	7.43	1896	4.03
1905	6.79	1895	3.42
1904	6.61	1894	3.15

The following table shows the percentages of the whole number of desertions occurring in each of the several specified periods of service during the last three years:

Period of service in which desertion took place.	Percentage of the whole number of desertions.		
	Year ended June 30, 1913.	Year ended June 30, 1912.	Year ended June 30, 1911.
First three months of service	14	15	13
Second three months of service	15	16	8
Third three months of service	13	16	7
Fourth three months of service	11	11	10
First year of service	53	58	38
Second year of service	17	13	20
Third year of service	6	3	14
First enlistment	76	74	72
Second enlistment	16	19	18
Third enlistment	4	4	6
Fourth enlistment and subsequent enlistments	4	3	4
Total	100	100	100

It will be seen from the foregoing table that, as compared with the two preceding fiscal years, there was a decrease in the relative number of desertions during the first year of service, although there was an increase in the number during the second and third years of service sufficiently large to make the relative number of desertions greater during the first enlistment period.

The percentages of desertions by branches of service during the fiscal years 1908–1913 are shown in the following table:

Branches of service.	Percentages.					
	1913.	1912.	1911.	1910.	1909.	1908.
Field Artillery	6.11	4.07	2.93	4.72	7.03	5.74
Engineers	4.68	4.26	3.09	3.12	5.53	4.73
Cavalry	4.53	2.95	1.92	2.97	4.76	5.68
Hospital Corps	4.24	3.03	3.10	3.15	4.18	4.55
Coast Artillery Corps	4.19	3.38	2.42	4.30	5.50	3.98
Infantry	3.95	2.37	1.85	2.99	4.26	3.90
All others, including unassigned recruits	3.18	3.32	2.85	5.21	5.48	5.42
The Army	4.15	3.00	2.28	3.66	4.97	4.59

The foregoing statement shows an increase in the percentage of desertions during the past fiscal year over the year 1912 in every branch of the service except those included under the heading "all others, including unassigned recruits."

As in the preceding reports, the percentages of desertions hereinbefore shown are based on the whole number of enlisted men who were in service at any time during the year, and are not based on an average enlisted strength. All the losses during the year are included in the basic figures used, and those figures represent the whole number of enlisted men who might have become deserters or the whole number of enlistment contracts that might have been terminated by desertion at some time during the year. It is clearly improper to use as a basis for calculating the percentages of desertions a strength obtained by averaging the number of men in service at the end of each month of the year—a number that does not include the men who went out of service during the year, and even does not include the deserters themselves. If, however, the average enlisted strength were used as a basis, it would be found that the number of desertions from the enlisted force of the Army during the fiscal year ended June 30, 1913, was 5.48 per cent of the strength as against 4.43 per cent during the preceding fiscal year, 3.49 during the year 1911, and 4.64 during the year 1910.

An examination of the returns for the fiscal year ended June 30, 1913, was made for the purpose of ascertaining what organizations serving within the continental limits of the United States had the lowest and highest relative number of desertions. It should be borne in mind that in the following paragraphs showing the results of that examination the organizations that served a part or the whole of the year in Hawaii, Alaska, the Panama Canal Zone, and the Philippine Islands are not taken into consideration, because in those regions it is unusually difficult for a deserter to make good his escape from military control, and consequently desertions there are so few as to be negligible for the purposes of this report.

The regiments serving in the United States that had the lowest percentages of desertions during the year were the Tenth Cavalry, Ninth Cavalry, and Fifth Infantry, the cavalry regiments being colored, and the infantry regiment a white organization. The desertions from those regiments were 1.99, 2.43, and 2.56 per cent, respectively, of the whole number of enlisted men in service, or of enlistment contracts in force, in those regiments. The Tenth Cavalry was one of the two regiments having the lowest percentage of desertions during the years 1910, 1911, and 1912, the percentages for those years, respectively, being 1.52, 0.78, and 1.52. During the past fiscal year the Sixth Field Artillery had the lowest percentage of desertions of any regiment of that arm serving in the United States, the desertions from that regiment being 5.31 per cent of the whole number of enlisted men serving in the regiment during the year.

The regiments with the highest percentages of desertions were the Twentieth Infantry, Twenty-first Infantry, Second Cavalry, and Fourth Field Artillery. The desertions from those organizations were 12.97, 12.60, 11.94, and 10.01 per cent, respectively.

In preceding annual reports it has been the practice to present a table showing the troops and companies from which no desertions were reported during the fiscal year, and a table showing the troops and companies that had the highest desertion ratios and their percentages of desertions. It is impracticable to present similar tables in this report for the fiscal year 1913, because of the difficulty involved and the amount of time that would be required in compiling the data from the new form of return, the use of which was begun July, 1912, the beginning of the fiscal year.

The tables given in preceding reports showing the posts in the United States that had the highest percentages and the lowest percentages of desertions are omitted from this report, because many of the troops in the United States, with the exception of the Coast Artillery Corps, have been absent from their permanent stations; therefore, the percentages obtained in this respect would be of little comparative value.

Of the white troops 4.33 per cent and of the colored troops 1.23 per cent were reported as deserters, as compared with 4.15 per cent for the whole Army. There was a decrease in the percentage of desertions among colored troops, as compared with the preceding year, of 0.03 per cent, and an increase among white troops of 1.26 per cent.

The following table shows for each month of the fiscal years 1911, 1912, and 1913 the percentages of the total number of desertions occurring during each of those years:

Months.	Fiscal years.			Months.	Fiscal years.		
	1913.	1912.	1911.		1913.	1912.	1911.
July	8.97	8.65	9.11	January	5.12	4.46	5.31
August	8.29	8.68	9.18	February	4.45	5.63	5.27
September	13.88	8.09	8.31	March	7.32	6.89	8.51
October	9.82	7.27	6.95	April	10.36	10.82	11.38
November	7.19	6.16	5.47	May	9.61	12.87	12.86
December	6.00	5.83	5.51	June	8.99	14.65	12.14
				Total	100.00	100.00	100.00

That nationality is not an important factor in considering the subject of desertions from the Army was again emphasized by the fact that during the past fiscal year the ratio of foreign-born deserters to the whole number of deserters was approximately the same as the ratio of foreign-born men who have enlisted in the Army during the past three years to the total number of enlistments during that period.

Reports of return of deserters to military control during the fiscal year ended June 30, 1913, were received in 2,227 cases, not including 74 cases found to be not amenable to trial because of the statute of limitations. Of the 2,227 deserters returned to military control during the year, 813, or 36.5 per cent, surrendered themselves, and 1,414, or 63.5 per cent, were apprehended. Of the latter number, 608 were apprehended by the municipal police; 286 by sheriffs or other county officers; 231 by private detectives and detective agencies; 157 by the military authorities, including those identified by finger-print records in The Adjutant General's Office; 37 by naval authorities; 26 by United States marshals and their deputies; 25 by State detectives and other State officers; 13 by civilians (not civil officers); 12 by railroad police; 7 by United States customs officers; 6 by United States immigration officers, and 6 by officers in charge of penal institutions. Of the total number of deserters apprehended during the year, 43 per cent were apprehended by the municipal police, 20.2 per cent by county officers, 16.3 per cent by private detectives and detective agencies, and 11.1 per cent by the military authorities.

The disposition of the cases of the 2,227 men returned to military control during the year ended June 30, 1913, is shown in the following table:

Disposed of without trial:		
Charge removed as erroneous under paragraph 131, Army Regulations	273	
Restored to duty	16	
Discharged without honor	30	
Discharged on surgeon's certificate of disability	4	
Escaped from confinement while awaiting trial	38	
Died	2	
		363
Tried by court-martial:		
Acquitted	2	
Convicted of absence without leave; not sentenced to discharge	432	
Convicted of absence without leave; dishonorably discharged	114	
Convicted of absence without leave; sentence of dishonorable discharge mitigated by reviewing authority	44	
Convicted of absence without leave; sentence of dishonorable discharge disapproved by reviewing authority	6	
Convicted of desertion; sentence of dishonorable discharge mitigated by reviewing authority	49	
Convicted of desertion; sentence of dishonorable discharge disapproved by reviewing authority	5	
Convicted of desertion; not sentenced to discharge	1	
Convicted of desertion; dishonorably discharged and confined	1,141	
		1,794
Reports of results of trial not yet received		70
Total		2,227

It will be seen by the foregoing table that of the men tried by general courts-martial on the charge of desertion 539 were retained in service and 1,255 were dishonorably discharged. The lengths of the sentences of confinement, as approved, in cases of men held to service are shown in the following table:

Less than one month	31
One to three months	206
Four to six months	242
Seven to twelve months	6
More than one year	5
	490
No sentence of confinement	49
Total	539

The length of sentences of confinement, as approved, in cases of men dishonorably discharged are shown in the following table:

Less than three months	11	
Three to six months	153	
Seven to twelve months	18	
Less than one year		182
One year		363
One year and a half		390
Two years		179

Two years and a half	81
Three years	25
Three years and a half	4
Four years and over	14
	1,238
No sentence of confinement	17
Total	1,255

Of the 539 cases in which the deserters were tried and retained in service, 119, or 22.1 per cent, have again deserted; 17 have been dishonorably discharged, and 7 have been discharged without honor, making a total of 143, or 26.5 per cent of the whole number who have deserted again or have had their services terminated other than honorably during the short time that has elapsed since their trials.

RESTORATION OF CITIZENSHIP AND REENLISTMENT OF DESERTERS.

The act of Congress approved August 22, 1912 (37 Stat. L., 356), in addition to a discontinuance of the loss of rights of citizenship because of desertion in time of peace, also authorized the President, where the offense was committed in time of peace, and where the exercise of such clemency will not be prejudicial to the public interests, to mitigate or remit the loss of rights of citizenship theretofore imposed by law upon deserters from the military service.

Pursuant to this legislation the rights of citizenship have been restored in the cases of 311 deserters from the Army, and adverse action was had in 14 cases, either because of conviction of a felony in addition to desertion, or because of adverse recommendation by the officer in charge of the prisoner on account of bad conduct while in confinement.

The legislation before cited also amended the act of Congress approved August 1, 1894, so that it should not be construed to preclude the reenlistment or muster into the Army of any person who has deserted, or may hereafter desert, in time of peace, or of any soldier whose service during his last preceding term of enlistment was not honest and faithful, whenever the reenlistment or muster into the military service of such person shall, in view of the good conduct of such person or soldier subsequent to such desertion or service, be authorized by the Secretary of War.

The reenlistment of 21 men (16 of them deserters) whose last prior service was not honest and faithful was authorized, and application for permission to enlist was denied in 4 cases, either because, in addition to desertion, of conviction of other offenses or because conduct while in confinement had not been such as to warrant favorable consideration.

DISCHARGES OF ENLISTED MEN ORDERED BY THE WAR DEPARTMENT.

The following table shows the number of discharges of enlisted men ordered by the War Department during the fiscal year ended June 30, 1913, with the reasons for discharge:

On account of fraudulent enlistment	173
On account of desertion	25
On account of desertion and fraudulent enlistment	5
On account of imprisonment under sentence of civil court	143

On account of having become disqualified for service through own misconduct	63
In the interest of the United States	34
To enter the Soldiers' Home	8
By purchase, under General Orders, No. 90, War Department, 1911, General Orders, No. 39, War Department, 1912, and General Orders, No. 23, War Department, 1913	763
Under paragraph IX, General Orders, No. 90, War Department, 1911, paragraph II, General Orders, No. 39, War Department, 1912, and paragraph III, General Orders, No. 23, War Department, 1913	71
For other reasons, clause (e), section 2, paragraph 149, Army Regulations	6
On certificate of disability after admission to the Government Hospital for the Insane	75
Total	1,366

DISCHARGES ON SURGEON'S CERTIFICATE OF DISABILITY

The method set forth in General Orders, No. 174, War Department, August 12, 1909, of discharging enlisted men for disability has been continued. During the year 960 enlisted men were recommended by post surgeons for discharge on certificate of disability and were ordered before boards of medical officers convened at recruit depots and general hospitals. Discharges were ordered on these certificates in 842 cases and on new certificates prepared by the boards in 90 cases. In 28 cases the soldiers were retained in service, the disability having been found insufficient to require discharge from service on that account. The numbers of soldiers retained in service in the three preceding years because the disabilities were insufficient to require discharge were as follows: 1912, 52; 1911, 67; and 1910, 29.

As stated in preceding annual reports, the chief beneficial effect of this method of discharging men on surgeon's certificate of disability lies in the fact that post surgeons, knowing that their certificates will be reviewed and the soldiers to whom the certificates relate reexamined by boards of expert medical examiners, exercise greater care in recommending the discharge of men for disability than they formerly did when no review of their work was possible.

It appears from the official returns that 1,056 enlisted men of the Regular Army, including the 75 enlisted men discharged after admission to the Government Hospital for the Insane, were discharged on surgeon's certificate of disability during the year. The difference between the number of discharges (932) on surgeon's certificate of disability after examination by boards of medical officers and the whole number of discharges (1,056) on surgeon's certificate of disability shown by the returns to have been made during the year is accounted for by the fact that some of the men shown by the returns to have been discharged on surgeon's certificate of disability were not ordered before boards of medical officers convened under General Orders, No. 174, of 1909. It is probable that many of the men discharged on surgeon's certificate of disability after admission to the Government Hospital for the Insane, and some of those discharged on account of pulmonary tuberculosis under the provisions of General Orders, No. 11, of 1912, were not ordered before boards of medical officers.

The number of discharges on surgeon's certificate of disability during the year ended June 30, 1913, was greater than the number during either of the years 1910, 1911, or 1912, the number of discharges during those years being 1,053, 780, and 1,046, respectively.

An examination of the records shows that 479 of the 1,056 discharges on surgeon's certificate of disability during the past fiscal year were based on disabilities that existed prior to enlistment. Of the 1,046 men discharged on surgeon's certificate of disability during the preceding year, 523 were discharged because of disabilities that existed prior to enlistment. During the year 1911, out of a total of 780 discharges of this class, 255 were discharged because of disabilities that existed prior to enlistment. These items, in terms of percentages, for the past four years are as follows: 1913, 45.3; 1912, 50; 1911, 32.7; 1910, 30.2.

DISCHARGES BY PURCHASE.

Section 4 of the act of Congress approved June 16, 1890 (26 Stat. L., 158), authorizes the President, in time of peace and "under such rules and upon such conditions as he shall prescribe," to permit any enlisted man to purchase his discharge from the Army. The regulations governing the subject are published in General Orders, No. 23, War Department, March 28, 1913.

In addition to the 763 discharges by purchase ordered by the War Department, as shown in a preceding section of this report, 2,557 discharges were ordered by commanding generals under the provisions of the general orders cited above, making a total of 3,320 discharges by purchase during the fiscal year ended June 30, 1913. The following table shows the number of applications for discharge by purchase, the disposition ordered by commanding generals, and the action of the War Department on applications forwarded there for decision:

Where disposed of.	Number of applications for discharge by purchase.	Discharges ordered.	Applications disapproved.
Eastern Division	775	758	17
Central Division	521	517	4
Western Division	373	343	30
Philippines Division	17	10	7
Eastern Department	511	505	6
Central Department	62	56	6
Western Department	215	166	49
Southern Department	100	97	3
Philippine Department	33	26	7
Hawaiian Department	52	48	4
Second (Tactical) Division	95	31	64
Total	2,754	2,557	197
Applications forwarded to the War Department	769	763	6
Aggregate	3,523	3,320	203

The number of discharges by purchase (3,320) during this fiscal year is greater than the number (2,475) discharged in 1912, and also larger than the number (2,160) discharged in 1911.

The discharges by purchase during this year exceeded the number of enlistments made for the Army during any one month of the year.

THE ADJUTANT GENERAL'S DEPARTMENT.

On June 30, 1912, there were 23 officers in the Adjutant General's Department. Since that date 4 officers have been detailed to the department from the line of the Army, and 4 relieved from detail, leaving a total of 23 officers in the department at date of this report, of whom 18 are serving with various military commands, and 5 are on duty in The Adjutant General's Office.

THE MILITARY ACADEMY.

On August 31, 1913, there were under assignment to duty at the United States Military Academy 115 commissioned officers (including 7 professors, 2 acting professors, and 2 associate professors), 1 librarian, 1 master of the sword, 1 teacher of music, 4 civilian instructors in languages, and 3 civilians employed as instructors in fencing, broadsword exercise, and military gymnastics, a total of 125. This is a decrease of 12 since August 31, 1912, the date of the superintendent's report for that year.

On September 1, 1912, there were 558 cadets on the rolls, including 2 foreign cadets, 1 of whom was from Cuba and 1 from Nicaragua. Between September 1, 1912, and September 1, 1913, 33 cadets were discharged for deficiency in studies or in conduct; 2 were dismissed by sentence of court-martial; 1 was dropped from the rolls, appointed a second lieutenant of infantry, and retired under the act of Congress approved March 4, 1913 (37 Stat. L., 865); 12 resigned, and 93, including 1 foreign cadet from Cuba, were graduated. In June, 1913, 167 cadets were admitted, including 1 foreign cadet from China, and 25 cadets were admitted in August, including 2 ex-cadets admitted without mental reexamination. Four ex-cadets were reinstated July 4, 1913, under authority of the act of Congress approved March 4, 1913 (37 Stat. L., 856), 1 of whom resigned July 5, 1913.

On September 1, 1913, there were 613 cadets on the rolls, including 2 foreign cadets, 1 of whom was from Nicaragua and 1 from China. Those cadets were divided among the four classes as follows: First class, 107; second class, 176; third class, 143; and fourth class, 187. Of this number, there is in each class 1 Filipino cadet, who is eligible upon graduation to appointment as an officer in the Philippine Scouts only.

The usual examination of candidates for admission to the Military Academy was held at various military posts April 29, 1913. An additional examination was held July 1, 1913, with a view to fill the 95 vacancies that existed after the regular examination. As a result of this additional examination, 20 of the 107 candidates designated were found qualified and 19 were admitted, the remaining candidate being an alternate for whom there was no vacancy. Including principals and alternates, 647 candidates were designated for the two examinations. Of that number, 150 failed to report, 14 failed to complete the examination, 16 declined appointment, 8 appointments were revoked by the War Department, and 249 were rejected upon mental or physical examination or upon both. There were no vacancies for 18 alternates and 5 candidates at large who qualified. The remaining 187 candidates were found qualified and were admitted to the

Academy in June and August, 1913. Five candidates, 2 of whom had qualified as alternates and 3 of whom had qualified as candidates at large, for whom there were no vacancies, were also admitted, under new appointments, making the total number admitted, as a result of the two examinations, 192.

Information concerning the operation of the several academic departments, the rebuilding and enlarging of the Military Academy, the discipline of the Corps of Cadets, and other matters of interest are to be found in the Annual Report of the Superintendent of the Academy. As it is customary to print that report with the other reports of the War Department, further reference to those subjects is omitted from this report.

RECRUITING FOR THE ARMY.

At the beginning of the fiscal year 1913 there were 144 officers on general recruiting detail, and at the end of that year there were 144. The latter number includes 38 retired officers detailed under the provisions of the act of Congress approved April 23, 1904 (33 Stat. L., 264), an increase of six over the number detailed last year; 79 officers regularly on duty at, and 1 en route to, recruiting depots; and 1 officer inspecting recruiting stations.

On June 30, 1912, there were 144 central recruiting stations, and on June 30, 1913, there were 145. Of this latter number, 59 were main stations, each of which was in charge of a recruiting officer, and the remainder were auxiliary stations. In the New York City recruiting district there were four officers in charge of stations under the supervision of the recruiting officer in charge of the district. In addition to the main and central auxiliary stations, temporary stations were opened from time to time for the purpose of canvassing the territory of the recruiting districts.

The smallest number of cities and towns canvassed by officers of the general recruiting detail in any one month was 252; the largest number canvassed in any one month was 312. During the preceding year those figures were 243 and 268, respectively.

As in preceding years, applicants for enlistment accepted at recruiting stations were sent to recruit depots and depot posts for physical examination and enlistment if found qualified. The enlistment of applicants for the line of the Army at general recruiting stations under special instructions from the War Department, begun June 26, 1912, because of lack of funds for their transportation to depots before the close of the fiscal year, was ordered discontinued July 1, 1912. Before the instructions to discontinue these enlistments reached all of the recruiting stations, however, 22 enlistments were made at recruiting stations for the line of the Army.

The total number of enlistments and reenlistments for the Army, including the Hospital Corps, Quartermaster Corps, and Philippine Scouts, during the fiscal year ended June 30, 1913, was 25,086. Of these, 23,050 were enlisted or reenlisted for the line of the Army, 570 for the Hospital Corps, 338 for the Quartermaster Corps, 510 for other staff departments, and 618 for the Philippine Scouts.

The original enlistments numbered 17,798, of which 16,986 were for the line of the Army, 184 for the Hospital Corps, 155 for the Quartermaster Corps, 110 for other staff departments, and 363 for the Philippine Scouts. The reenlistments numbered 7,288, of which 6,064 were for the line of the Army, 386 for the Hospital Corps, 183 for the Quartermaster Corps, 400 for other staff departments, and 255 for the Philippine Scouts.

The plan, authorized by the Secretary of War April 1, 1912, and outlined in the annual report for the fiscal year 1912, of furnishing recruits at regular half-yearly intervals, determined in advance for each regiment and separate organization, was continued during the fiscal year covered by this report, except when recruits were lacking or there was need for deviation from that special plan.

The following table shows the number of applicants accepted and the number rejected at general recruiting stations, including those at auxiliary stations, during the fiscal year ended June 30, 1913:

Recruiting districts.	Number of applicants accepted.	Number of applicants rejected.	Total number of applicants.	Applicants accepted at stations and subsequently rejected at depots and depot posts.
Albany, N. Y	176	1,052	1,228	18
Atlanta, Ga	589	1,467	2,056	59
Baltimore, Md	238	1,485	1,723	27
Boston, Mass	406	2,284	2,690	52
Buffalo, N. Y	357	2,286	2,643	40
Charlotte, N. C	624	2,892	3,516	79
Chicago, Ill.:				
601 West Madison Street	723	3,685	4,408	95
505 South State Street	1,371	4,013	5,384	187
905 South State Street	484	1,644	2,128	57
Cincinnati, Ohio	552	1,504	2,056	71
Cleveland, Ohio	183	1,234	1,417	19
Columbus, Ohio	188	819	1,007	14
Dallas, Tex	328	1,272	1,600	55
Denver, Colo	557	3,769	4,326	113
Detroit, Mich	724	4,195	4,919	141
Duluth, Minn	181	1,377	1,558	16
El Paso, Tex	147	340	487	14
Evansville, Ind	401	991	1,392	46
Grand Rapids, Mich	211	957	1,168	48
Harrisburg, Pa	171	270	441	32
Huntington, W. Va	345	1,383	1,728	51
Indianapolis, Ind	961	1,844	2,805	171
Joplin, Mo	375	2,770	3,145	48
Kansas City, Mo	416	858	1,274	36
Knoxville, Tenn	496	1,955	2,451	72
Lexington, Ky	316	1,388	1,704	59
Little Rock, Ark	295	1,007	1,302	84
Los Angeles, Cal	227	461	688	15
Louisville, Ky	507	1,313	1,820	55
Memphis, Tenn	305	1,500	1,805	41
Nashville, Tenn	239	709	948	40
Newark, N. J	233	1,245	1,478	46
New Haven, Conn	181	942	1,123	29
New Orleans, La	249	550	799	38
New York, N. Y	3,297	13,758	17,055	533
Oklahoma, Okla	447	2,571	3,018	63
Omaha, Nebr	292	652	944	45
Parkersburg, W. Va	215	529	744	31
Peoria, Ill	28	63	91	5
Springfield, Ill.[1]	336	749	1,085	43
Philadelphia, Pa	522	1,717	2,239	57
Pittsburgh, Pa	240	810	1,050	38
Portland, Me	234	1,595	1,829	38
Portland, Oreg	141	608	749	20
Providence, R. I	406	1,059	1,465	71
Richmond, Va	175	625	800	20
Roanoke, Va	230	477	707	30
St. Louis, Mo	769	4,038	4,807	98
St. Paul, Minn	355	882	1,237	44
Salt Lake City, Utah	197	498	695	25

[1] Main station changed from Springfield, Ill., to Peoria, Ill., June 4, 1913.

Recruiting districts.	Number of applicants accepted.	Number of applicants rejected.	Total number of applicants.	Applicants accepted at stations and subsequently rejected at depots and depot posts.
San Francisco, Cal	1,061	4,443	5,504	136
Savannah, Ga	300	1,454	1,754	21
Scranton, Pa	165	1,017	1,182	21
Seattle, Wash	154	426	580	12
Spokane, Wash	185	557	742	27
Springfield, Mass	158	820	978	24
Syracuse, N. Y	236	842	1,078	31
Terre Haute, Ind	402	1,338	1,740	56
Toledo, Ohio	211	1,307	1,518	32
Wichita, Kans	225	631	856	35
Total	24,737	98,927	123,664	3,469

It will be seen from the foregoing table that 80 per cent of the applicants for enlistment at recruiting stations were rejected at those stations, also that 14 per cent of those accepted at stations were subsequently rejected at depots. These items for the preceding fiscal year were, respectively, 76 and 12 per cent.

Recruiting officers have been directed to make their personal examinations of recruits more thorough in order to reduce the number rejected at depots and depot posts.

The following table shows the number of enlistments (including reenlistments) for the Army and the number of applicants rejected at the recruit depots, depot posts, and other military posts, and in the field during the fiscal year ended June 30, 1913:

Station or post.	Number enlisted.	Number rejected.	Total number enlisted and rejected.
General recruiting stations	[1] 231	....	[1] 231
Recruit depots:			
Columbus Barracks, Ohio	5,215	1,007	6,222
Jefferson Barracks, Mo	4,554	783	5,337
Fort Logan, Colo	1,598	345	1,943
Fort McDowell, Cal	994	157	1,151
Fort Slocum, N. Y	5,205	1,031	6,236
Total	17,566	3,323	20,889
Depot posts:			
Fort Bliss, Tex	100	....	100
Fort Douglas, Utah	48	....	48
Fort George Wright, Wash	153	29	182
Jackson Barracks, La	208	34	242
Fort Lawton, Wash	156	9	165
Fort Sam Houston, Tex	130	12	142
Fort Snelling, Minn	427	74	501
Vancouver Barracks, Wash	183	25	208
Fort William Henry Harrison, Mont	9	....	9
Total	1,414	183	1,597
Military posts (other than depot posts)	4,217	137	4,354
In the field	842	7	849
Porto Rico Regiment of Infantry	198	41	239
Aggregate	24,468	3,691	28,159

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[1] Of the 231 enlistments at general recruiting stations, 209 were of former soldiers, enlisted for duty with recruiting parties in the districts in which they were enlisted. The remaining 22 enlistments were made for various arms of the service on July 1, 1912, before instructions to cease such enlistments had reached all of the stations.

The foregoing table does not include 618 enlistments and 123 rejections for the Philippine Scouts. If these are included, the enlistments number 25,086 and the rejections 102,741, including 98,927 rejections at the general recruiting stations, a total of 127,827 enlistments and rejections during the fiscal year ended June 30, 1913, for the entire Military Establishment.

Of the applications rejected during the fiscal year, 19,670 were rejected because the applicants were minors, 4,834 because they were aliens, and 3,974 because they were illiterates. Of the applicants, 2,889 declined after acceptance to enlist at depots, most of them giving the seven year period of enlistment as one of the reasons for declining.

The following table shows the race and nativity of the men enlisted and reenlisted for the Army during the fiscal year ended June 30, 1913:

Race and nativity.	Regular Army.					Philippine Scouts.	Aggregate.
	Line of Army.	Staff departments, not including Hospital Corps and Quartermaster Corps.	Hospital Corps.	Quartermaster Corps.	Total.		
Native white:							
Enlistments	13,563	106	164	134	13,967	....	13,967
Reenlistments	4,145	268	293	129	4,835	....	4,835
Total	17,708	374	457	263	18,802	....	18,802
Foreign white:							
Enlistments	2,055	4	16	14	2,089	....	2,089
Reenlistments	1,045	126	65	40	1,276	....	1,276
Total	3,100	130	81	54	3,365	....	3,365
Colored:							
Enlistments	1,258	....	2	6	1,266	....	1,266
Reenlistments	742	6	26	9	783	....	783
Total	2,000	6	28	15	2,049	....	2,049
Indians:							
Enlistments	5	....	....	....	5	....	5
Reenlistments	22	....	....	....	22	....	22
Total	27	....	....	....	27	....	27
Porto Ricans:							
Enlistments	103	....	2	1	106	....	106
Reenlistments	103	....	2	5	110	....	110
Total	206	....	4	6	216	....	216
Filipinos:							
Enlistments	[1] 2	....	....	....	2	363	365
Reenlistments	[1] 7	....	....	....	7	255	262
Total	9	....	....	....	9	618	627
Total enlistments	16,986	110	184	155	17,435	363	17,798
Total reenlistments	6,064	400	386	183	7,033	255	7,288
Aggregate	23,050	510	570	338	24,468	618	25,086

[1] Band musicians.

Eighty-seven per cent of the original enlistments of white soldiers during the fiscal year ended June 30, 1913, were enlistments of men born in the United States. During the preceding fiscal year that percentage was 88, and during the fiscal year 1911 it was 89.

The following table shows, by months, the number of enlistments and reenlistments in the line of the Army during the three years ended June 30, 1913:

Months.	Fiscal year ended—								
	June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
July	1,344	563	1,907	2,250	1,425	3,675	678	614	1,292
August	1,557	556	2,113	2,467	1,329	3,796	1,473	704	2,177
September	1,347	481	1,828	1,917	1,315	3,232	1,266	646	1,912
October	1,441	598	2,039	2,079	1,167	3,246	1,325	822	2,147
November	1,105	387	1,492	2,346	1,225	3,571	1,388	1,026	2,414
December	1,494	446	1,940	2,574	1,104	3,678	2,155	1,438	3,593
January	1,868	581	2,449	2,801	1,198	3,999	2,637	1,735	4,372
February	1,472	700	2,172	2,224	1,068	3,292	2,231	1,582	3,813
March	1,522	592	2,114	2,293	606	2,899	2,660	1,719	4,379
April	1,217	435	1,652	1,408	429	1,837	2,423	1,240	3,663
May	1,313	369	1,682	1,831	322	2,153	1,909	1,284	3,193
June	1,306	356	1,662	1,591	413	2,004	1,838	1,362	3,200
Total	16,986	6,064	23,050	25,781	11,601	37,382	21,983	14,172	36,155

The average total monthly enlistments obtained from the foregoing table are as follows: For the fiscal year 1911, 3,013; for 1912, 3,115; and for 1913, 1,921. It appears also that the falling off in reenlistments (within the three months' period) commenced in March, 1912, and in original enlistments in the following month of April. As the seven year enlistment period established by the act of August 24, 1912, did not go into effect until November 1, 1912, the falling off of enlistments during the seven and eight months preceding can scarcely be attributed to that law. It is also observed that the enlistments commencing with July and ending with October in the fiscal year 1911 were 659 less than during the same period in the fiscal year 1913, the enlistment period being three years in both cases. The total monthly enlistments for July, August, and September (since the close of the fiscal year) averaged 2,353, which is larger than that for any corresponding period in the last fiscal year.

While the number of reenlistments during any one month must vary with the number of men discharged within the preceding three months, no one cause can be pointed out as chiefly influencing original enlistments.

The table following shows, by branches of the service, the number of enlistments and reenlistments in the Army during the three years ended June 30, 1913.

Branches of service.	Fiscal year ended—								
	June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
Staff departments [1]	449	969	1,418	481	1,107	1,588	461	1,425	1,886
Engineers	52	151	203	99	222	321	90	309	399
Cavalry	6,484	1,154	7,638	5,884	1,820	7,704	6,222	2,472	8,694
Field Artillery	653	232	885	2,333	468	2,801	1,884	779	2,663
Coast Artillery Corps	4,073	1,505	5,578	7,107	3,480	10,587	4,205	4,033	8,238
Infantry	5,714	2,941	8,655	10,327	5,480	15,807	9,566	6,396	15,962
Miscellaneous	10	81	91	31	131	162	16	183	199
Total	17,435	7,033	24,468	26,262	12,708	38,970	22,444	15,597	38,041

[1] Including the Hospital Corps and Quartermaster Corps.

It is believed that the relative increase or decrease in the number of enlistments and reenlistments in the respective branches of the service will be more apparent if the numbers in the foregoing table are reduced to percentages of the total number of enlistments and reenlistments each year. Consequently the following table, showing those percentages, is presented:

Branches of service.	Percentages of total number of enlistments and reenlistments during the fiscal year ended—								
	June 30, 1913.			June 30, 1912.			June 30, 1911.		
	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.	Enlistments.	Reenlistments.	Total.
Staff departments [1]	1.84	3.96	5.80	1.23	2.84	4.07	1.21	3.75	4.96
Engineers	.21	.62	.83	.25	.57	.82	.24	.81	1.05
Cavalry	26.50	4.71	31.21	15.10	4.67	19.77	16.36	6.50	22.86
Field Artillery	2.67	.95	3.62	5.99	1.20	7.19	4.95	2.05	7.00
Coast Artillery Corps	16.65	6.15	22.80	18.24	8.93	27.17	11.05	10.60	21.65
Infantry	23.35	12.02	35.37	26.50	14.06	40.56	25.15	16.81	41.96
Miscellaneous	.04	.33	.37	.08	.34	.42	.04	.48	.52
Total	71.26	28.74	100.00	67.39	32.61	100.00	59.00	41.00	100.00

[1] Including the Hospital Corps and the Quartermaster Corps.

It appears from the foregoing table that, as compared with the whole number of enlistments and reenlistments, the relative number of reenlistments during the fiscal year 1913 was less than during either of the two preceding fiscal years.

It is believed that a comparison of the numbers of reenlistments in the several branches of the service with the authorized enlisted strength of those branches will show more accurately the relative number of reenlistments in the several branches of the service. The table following shows the number of reenlistments to each 1,000 of the authorized strength of the several branches of the service during the fiscal years 1913, 1912, and 1911.

Branches of service.	Number of reenlistments to each 1,000 of the authorized enlisted strength during the fiscal year ended—		
	June 30, 1913.	June 30, 1912.	June 30, 1911.
Staff departments [1]	167	472	244
Engineers	78	114	154
Cavalry	82	132	194
Field Artillery	42	86	149
Coast Artillery Corps	81	188	209
Infantry	87	174	248
Miscellaneous	9	15	19
The Army	80	156	194

[1] Including the Hospital Corps, but not including the Quartermaster Corps.

It is evident from the foregoing table that, as compared with the authorized strength, there was a marked decrease in the relative number of reenlistments in each branch of the service.

The reports of the recruiting officers showing whether or not the applications for enlistment received by them were the result, wholly or in part, of any form of advertising, and if so, of what form, were continued during the year with a view to keeping the War Department informed as to the efficacy of each of the various methods of advertising for recruits. The following table shows the number of applications reported to have been the result of each of the several methods of advertising during the fiscal year ended June 30, 1913:

Methods of advertising.	Number of applications.
Sight of recruiting flag and station	53,194
Recruiting poster	22,305
Newspaper advertisement	10,646
In parks and squares (in 17 districts from July to December; in 21 districts during January and April; in 22 districts during February and March; and in 23 districts during May and June)	9,298
Recruiting circular	8,622
Canvass by recruiting parties	7,963
Special circulars and handbills issued by recruiting officers (in 2 districts during July, August, September, December, January, and April; in 3 districts during October, March, May, and June; and in 4 districts during November and February)	3,021
Handbills	2,275
Painted bulletin boards (in 8 districts from September to June; in 1 district during July; and in 2 districts during August)	658
Advertising cards (in 4 districts during July, August, December, and January; in 5 districts during September, November, February, March, May, and June; and in 6 districts during October and April)	626
Personal letters from recruiting officers (in 3 districts during January and February; in 4 districts during July; in 5 districts during August, from October to December, and from April to June; and in 6 districts during September and March)	563
Photographs on display frames (in 1 district during June)	285
Slides exhibited in moving-picture houses (in 14 districts from April 7 to June 30)	196
Postal cards (in 1 district from July to October, and during January, February, April, and June; and in 2 districts during November, December, and March)	37
Night electrical recruiting sign (in 1 district during May and June)	26
Friends in the Army	21
News items in newspapers (in 1 district during September, November, December, and April)	13
Wall and fence signs (in 1 district during September)	9
Total	119,778
Not the result of advertising	5,167
Total number of applicants reported upon	124,945

It is evident from the foregoing list of methods of advertising for recruits that the recruiting officers continued to exercise exhaustive and resourceful efforts to attract the attention of men who are likely to become candidates for enlistment.

A comparison of the results obtained in the larger cities from the principal methods of advertising with the results obtained in the smaller cities is interesting. The following table shows for all recruiting stations, for the stations in 10 large cities, and for those in 10 small cities the percentages of applicants for enlistment attracted by each of the principal methods of advertising during the fiscal year ended June 30, 1913:

Methods of advertising.	All recruiting stations.	10 large cities.	10 small cities.
Sight of recruiting flag and station	42.58	50.59	34.60
Recruiting poster	17.85	11.95	26.34
Newspaper advertisement	8.52	5.15	9.08
In parks and squares	7.44	10.93	3.19
Recruiting circular	6.90	6.24	11.50
Other methods	12.58	11.99	13.06
Not the result of advertising	4.13	3.15	2.23
Total	100.00	100.00	100.00

It will be seen from the foregoing table that, as in previous years, the sight of the recruiting flag and station attracted more applicants than any other method, the recruiting poster being second. In the large cities approximately 50 applicants were attracted by the sight of the recruiting flag and station to 12 attracted by the recruiting poster, while in the small cities but 34 were attracted by the recruiting flag and station to 26 attracted by the recruiting poster.

The following remarks, extracted from the annual reports of the commanding officers of the several recruit depots, are interesting:

> The squad system for the control, instruction, and drill of recruits, and the schedule of instruction covering 36 working days, has continued in force for the year with satisfactory and gratifying results. No changes in the system are suggested. Improvement is marked and with compulsory fresh-air exercise of the recruits, combined with regular hours, systematic exercise, progressive drill, and good food, it is a pleasure to inspect a draft of outgoing men, bearing in mind their physical condition and general bearing when enlisted. (Report of the commanding officer, Fort Slocum.)
>
> The conditions referred to in my last annual report, with exception of the term of service changed by law, have remained practically unchanged. The scheduled course of instruction, prescribed by the department, has been carried out. This consists of drills in the forenoon, followed by parade—weather permitting—and, in the afternoon, at least two hours of athletic sports.
>
> * * * * * * *
>
> In addition to the scheduled instruction, by authority of The Adjutant General a class of field musicians was organized October 1, 1912, with good results. Up to the present time there have been sent to posts 18 field musicians who may be regarded as entirely proficient for duty in all arms, while there are still on hand 14 field musicians available for assignment and 12 recruits undergoing instruction. These instructions are carried out without detriment to the other portion of the course, and so far as can be ascertained have been productive of good results.
>
> * * * * * * *
>
> Under date of June 24, 1913, I submitted to The Adjutant General the question of organizing a class of men to be educated for clerical purposes, especially clerks of organizations. The authority requested has been granted and such a class is in progress of organization with curriculum fixed. Subject to ap-

proval, it is proposed to extend the course to include instruction of men for recruiting station duty. (Report of commanding officer, Columbus Barracks.)

The system of instruction has been developed after careful thought and experimentation by interested officers and noncommissioned officers.

It is excellent in every respect, the results obtained are satisfactory, and no changes are recommended. (Report of commanding officer, Jefferson Barracks.)

In the instruction of recruits the system prescribed from The Adjutant General's Office has been carefully followed. The results of this instruction have been very satisfactory. In a number of cases recently it has been necessary to forward recruits to organizations who had not completed the entire course of instruction in order to fill the drafts called for by orders from The Adjutant General, but it is believed that none have been sent who were not properly qualified for duty with their organizations, including the performance of guard duty. (Report of commanding officer, Fort Logan.)

The scheme of drill instruction devised by one of my predecessors in compliance with your letter of December 6, 1910, has been followed without change, except to comply with alterations in drill regulations. For men of the dismounted arms this schedule is eminently satisfactory, and when a recruit remains here long enough to complete the 36 days instruction laid down therein it is believed that he is qualified to take his place in ranks immediately upon joining an organization without further recruit instruction. (Report of commanding officer, Fort McDowell.)

The commanding officer at the Columbus Barracks Depot, in commenting on athletic sports and amusements, said:

The benefit of the facilities for athletic sports can not be overestimated, and their effect upon the personnel of the recruit is of inestimable value. This was emphasized by the experience had at the depot during the time following the flood in March and April, last; during that time it was found necessary to close the places of amusement, and impracticable to carry on the work of relief and athletic sports at the same time. The difference shown at inspections, when men deprived of these exercises were about to leave the depot, was marked; while, at the same time, discipline suffered materially, showing plainly a double evil effect.

ARMY RESERVE.

Authority for the establishment of the Army reserve is contained in the second paragraph of section 2 of the Army appropriation act, approved August 24, 1912 (37 Stat. L., 590). The provisions of the act authorizing the establishment of the reserve became effective November 1, 1912.

The authorized reserve is to consist of (1) soldiers furloughed to the reserve for the unexpired portions of seven year terms of enlistment, either after four years' service with an organization of which they formed a part, or, upon their application, after three years' service with an organization; and (2) those who enlist or reenlist in the reserve after having been honorably discharged from the Regular Army.

General Orders, No. 11, War Department, 1913, contains information relative to the composition of the reserve and the status of the reservists, a description of the system to be used in keeping records of them, and instructions relative to recruiting for the reserve. Instructions were also issued (par. I, General Orders, No. 26, War Department, Apr. 15, 1913) requiring that soldiers then in service who had enlisted prior to November 1, 1912, be made fully acquainted with the provisions and purposes of the law creating the reserve, and that efforts be made to induce such of those men as were qualified and did not intend to continue in active service to enlist in the reserve. Instructions were also issued that, with the enlistment papers, there be forwarded to this office the applications of such recruits as desire transfer to the reserve at the end of three years' service with an organization.

Approximately 21,000 men enlisted in the Army between November 1, 1912, and August 31, 1913, and of those, 61 have made application to be furloughed to the reserve at the expiration of three years' service with an organization.

On August 31, 1913, the reserve consisted of 8 men, 7 of them enlisting in New York City and vicinity, and 1 in Porto Rico.

CAMPS OF INSTRUCTION.

A camp of instruction consisting of the Tenth Cavalry, the Eleventh Cavalry, and the First and Third Squadrons, Fifteenth Cavalry, assembled at Winchester, Va., about July 18, 1913. The camp was discontinued on September 30, 1913.

A camp for students was held at Gettysburg, Pa., from July 7 to August 29, 1913. Military instruction was given in this camp under the direction of officers of the Regular Army. A similar camp was held at the Presidio of Monterey, Cal.

Camps of instruction for the Field Artillery were held at Tobyhanna, Pa., Fort Riley, Kans., and Fort Sill, Okla.

COAST DEFENSE EXERCISES.

Coast Artillery troops of the Regular Army and of the Organized Militia of States on the Atlantic and Pacific seaboards engaged in coast defense exercises during the current year. Those exercises, planned in accordance with instructions issued from the War Department, were conducted under the supervision of the department commanders.

As many of the reports relative to those exercises have not yet been received, a complete statement showing the number of troops of the Regular Army and the number of troops of the Organized Militia that participated in them can not be presented in this report.

SMALL-ARMS FIRING.

As the regular target practice season varies in the several departments, and in some instances extends to the close of the calendar year, it has been found to be impracticable to make a complete statement of the results of the practice for the year 1913 in the current annual report. It has been the custom to announce the results of target practice in War Department general orders or bulletins as soon as the reports for the year have been received, examined, and digested.

The results of the small-arms firing of the several organizations of the line of the Army in target practice for the year 1912, not including the organizations stationed in the Philippine Islands, were published in Bulletin No. 16, War Department, April 12, 1913. Because of the fact that under the Provisional Small-Arms Firing Manual, 1909, qualification in the grades of expert rifleman and sharpshooter was made more difficult there has been a decrease in the number of qualifications in rifle firing in those grades for 1910, 1911, and 1912, as compared with the number for the year 1909. There was a marked improvement, however, in the grades of sharpshooter and marksman for the year 1912. For the target year 1910, 2,151 expert riflemen, 8,857 sharpshooters, and 5,741 marksmen; for the target year 1911, 1,211 expert riflemen, 7,326 sharpshooters, and 5,196 marksmen, and for the target year 1912, 1,312 expert riflemen, 9,323 sharpshooters, and 6,307 marksmen of the line of the Army were reported as qualified, as against 2,875 expert riflemen, 9,790 sharpshooters, and 5,815 marksmen for the year 1909. The decrease was due also, to some extent at least, to the fact that only officers who actually fired were classified for the target years 1910, 1911, and 1912, and that some organizations were excused from record practice because of the exigencies of the service during the period of the regular small-arms practice.

Under paragraph 1368, Army Regulations, enlisted men qualifying as expert riflemen, sharpshooters, and marksmen are entitled to additional pay of $5, $3, and $2 a month, respectively, " from the date of qualification to the end of the enlistment in which they qualify, provided that during that time they do not attain a higher classification, and that they continue to be members of an organization armed with the rifle or are transferred for the convenience of the Government to some organization not so armed."

The grade of expert revolver shot was established in revolver practice by paragraph 349, Provisional Small-Arms Firing Manual, 1909, and reports of the results of revolver firing in the several organizations of the line of the Army during the target years 1910, 1911, and 1912 show, respectively, 810, 1,050, and 1,335 qualifications in that grade. A silver badge is provided for each original qualification.

Paragraph 264, Provisional Small-Arms Firing Manual, 1909, provides that departmental and Army small-arms competitions shall be held in each alternate year. The Secretary of War has directed that they be held in the odd-numbered years. In 1913 departmental competitions were held in the Eastern, Southern, and Western Departments, and were followed by the Army competitions at Fort Niagara, N. Y., which began August 4, 1913, and in which the membership of the Army rifle team and the Army revolver team was determined. Instructions for holding the Army rifle and revolver competitions were published in General Orders, No. 38, War Department, May 26, 1913. Departmental competitions were not held in the Central and Hawaiian Departments because of the exigencies of the service.

The following table shows the number of competitors in each of the competitions for the year 1913:

Competitions.	Number of competitors.					
	Rifle.			Revolver.		
	Enlisted men.	Commissioned officers.	Distinguished marksmen.	Enlisted men.	Commissioned officers.	Distinguished marksmen.
Eastern	112	10	4	37	10	6
Southern	71	7	4	79	8	5
Western	89	7	1	31	8	....
Army	56	3	....	34	10	....

The number of medals awarded to the successful competitors in those competitions is shown in the following table:

Competitions.	Number of medals awarded.			
	Rifle.		Revolver.	
	Enlisted men.	Commissioned officers.	Enlisted men.	Commissioned officers.
Eastern	22	1	7	1
Southern	14	2	15	5
Western	18		6	
Army	12		12	6

The National Board for the Promotion of Rifle Practice arranged for the holding of the several annual competitions for 1913 on the Ohio State range at Camp Perry, Ottawa County, Ohio, and prescribed conditions and regulations for those competitions. Those conditions and regulations, having received the approval of the Secretary of War, were published in Bulletin No. 3, War Department, January 31, 1913. The competitions began August 25, 1913, with the national individual match, followed by the national team match and the national revolver match, under the supervision of Brig. Gen. Robert K. Evans as executive officer. In the national team match there were entered 2 teams, 1 Cavalry and 1 Infantry, from the Army, 1 from the Navy, 1 from the Marine Corps, and 41 teams from the Organized Militia. No teams were sent by the Organized Militia of Arkansas, Delaware, Idaho, Louisiana, Missouri, Nebraska, Nevada, New Hampshire, or South Dakota. The competing teams were divided into three classes, A, B, and C, upon the basis of their relative standing in the national team match of 1911, and prizes were awarded to each of the teams making the four highest aggregate scores in each class.

The following table shows the winning teams, the scores made, and the prizes won in that competition:

Order.	Team.	Score.	Prize.
	Class A.		
1	United States Cavalry	2,675	National trophy and $450.
2	United States Navy	2,655	$350.
3	Oregon	2,605	$300.
4	United States Marine Corps	2,602	$250.
	Class B.		
1	Alabama	2,547	Hilton trophy and $350.
2	Texas	2,542	$250.
3	Indiana	2,529	$225.
4	Florida	2,508	$200.
	Class C.		
1	Utah	2,493	Bronze soldier of Marathon and $300.
2	Rhode Island	2,450	$200.
3	Montana	2,416	$175.
4	Wyoming	2,373	$150.

A bronze medal was also awarded to each member of the winning teams, the medals for each class being of a different design.

The interest manifested by the militia in the national team matches is shown by the number of entries each year since the institution of those matches. Eleven State teams were represented in 1903, 19 in 1904, 32 in 1905, 37 in 1906, 43 in 1907, 45 in 1908, 43 in 1909, 38 in 1910 and in 1911, and 41 in 1913. It is observed that the maximum number of State teams represented was reached in 1908. There was no national team match in 1912.

The first prize in the national individual match—a gold medal and $60—was won by Artificer Edward W. Sweeting, Company I, Sixteenth Pennsylvania Infantry, with a score of 238, and the first prize in the national revolver match—a gold medal and $30—was won by J. H. Snook, Columbus Revolver Club, with a score of 393.

The detailed results of the matches at Camp Perry will be published in a War Department bulletin as soon as the returns shall have been digested and the compilations completed.

MOBILIZATION OF SECOND DIVISION.

Under orders issued from the War Department February 21 and 24, 1913, the three brigades of the Second Division, with the division staff and divisional troops, moved from their regular stations to Galveston and Texas City, Tex. The division headquarters is located at the latter place. The strength of the organizations involved in this movement was approximately 11,450 officers and men.

TROOPS ENFORCING NEUTRALITY LAWS ON THE MEXICAN BORDER.

There are now on duty in connection with the enforcement of the neutrality laws on the Mexican border the following named organizations of the Army: Battery A, Third Field Artillery; Battery C, Sixth Field Artillery; Company I, Signal Corps, and the Second, Fifth, Ninth, Thirteenth, and Fourteenth Regiments of Cavalry. The strength of these organizations is approximately 4,350 officers and men.

GOVERNMENT HOSPITAL FOR THE INSANE.

It appears from the reports of the superintendent of the Government Hospital for the Insane that during the fiscal year covered by this report 216 persons were admitted to that institution on account of service in the Regular or the Volunteer Army of the United States. Those admissions consisted of 3 officers and 68 enlisted men on the active list, 2 retired officers, 7 retired enlisted men, 30 former enlisted men of the Regular Army, 101 former Volunteers, and 5 general prisoners.

There were eight commissioned officers of the Army under treatment at the hospital at the beginning of the fiscal year. During the year five officers (three active and two retired) were admitted to the hospital, two died and three were relieved from treatment, leaving eight officers of the Regular Army under treatment at that institution on June 30, 1913.

The practice, begun in February, 1912, of notifying the superintendent of the hospital at least 30 days in advance of the date on which it is proposed to discharge from the Army an enlisted man admitted to that institution was continued during the fiscal year covered by this report.

UNITED STATES MILITARY PRISON.

By law the government and control of the United States Military Prison is vested, under the Secretary of War, in the Board of Commissioners of the United States Soldiers' Home, and the president of that board is required to submit to the Secretary of War annually a statement of the financial and other affairs of the prison. It is believed, therefore, to be unnecessary to present in this report anything with regard to the United States Military Prison or the Pacific Branch thereof other than to show the number of general prisoners in confinement there.

At the beginning of the fiscal year 953 general prisoners were in confinement at the United States Military Prison, Fort Leavenworth, Kans. During the year 863 general prisoners were received, 793 were released upon expiration of sentence, 51 were released by remission of sentence, 4 escaped, 3 died, and 14 were transferred to other places of confinement, leaving 951 general prisoners in confinement there on June 30, 1913.

At the beginning of the year there were 473 general prisoners in confinement at the Pacific Branch of the United States Military Prison. During the year 353 general prisoners were received, 380 were released upon expiration of sentence, 37 were released by remission of sentence, and 20 were transferred to other places of confinement, leaving 389 general prisoners in confinement there on June 30, 1913.

GENERAL PRISONERS.

At the beginning of the fiscal year 1913 there were 2,282 general prisoners in custody. Of this number 781 were in confinement at military posts, 15 at the United States Penitentiary, Leavenworth, Kans., 953 at the United States Military Prison, Fort Leavenworth, Kans., 473 at the Pacific Branch, United States Military Prison, Alcatraz Island, Cal., 34 at the Government Hospital for the Insane, Washington, D. C., and 26 were in transit from one place of confinement to another.

During the fiscal year 2,596 general prisoners were committed to confinement, 22 escaped prisoners were recaptured, 2,357 general prisoners were released at expiration of sentence, 49 escaped, 10 died, 8 were paroled, and the whole of the unexecuted part of the sentence was remitted in 129 cases, leaving 2,347 general prisoners in custody on June 30, 1913. Of the number in confinement at the end of the year, 920 were at military posts, 13 at the United States Penitentiary, Leavenworth, Kans., 951 at the United States Military Prison, Fort Leavenworth, Kans., 389 at the Pacific Branch, United States Military Prison, Alcatraz Island, Cal., 35 at the Government Hospital for the Insane, Washington, D. C., and 39 were in transit from one place of confinement to another.

It will be seen from the foregoing figures that at the end of the year there were 139 more general prisoners in confinement at military posts than there were at the beginning of the year, 1 more at the Government Hospital for the Insane, and 15 more in transit, while there were 2 less in the number confined at the United States Penitentiary, 2 less at the United States Military Prison, and 84 less at the Pacific Branch, United States Military Prison, making a net increase in the number in confinement at the end of the year of 65.

The number of general prisoners reported to have escaped during the year was 15 more than during the preceding year and 3 more than during the fiscal year 1911. Of the 49 escapes reported, 4 occurred at the United States Military Prison, Fort Leavenworth, Kans., and the remainder (45) escaped from the military posts at which they were confined. The largest number of escapes from military posts were reported as having occurred at the Presidio of San Francisco, Cal., Fort McPherson, Ga., and Vancouver Barracks, Wash., those numbers being 6 for the first and 4 each for the latter two posts. During the preceding year the largest numbers of escapes occurred at Fort Sheridan, Ill., and Fort Jay, N. Y., those numbers being 5 and 4, respectively. During the past fiscal year 3 escapes were reported from Fort Bliss, Tex., and Camp John Hay, P. I.; 2 from Fort Adams, R. I., Fort Hamilton, N. Y., Fort Jay, N. Y., Fort Myer, Va., Fort Totten, N. Y., Fort Riley, Kans., and Fort Lawton, Wash.; 1 from Jackson Barracks, La., Fort Oglethorpe, Ga., Fort Williams, Me., Fort D. A. Russell, Wyo., Fort Leavenworth, Kans., Fort Logan H. Roots, Ark., Fort Sheridan, Ill., Fort Sam Houston, Tex., Fort Douglas, Utah, Fort Worden, Wash., and Jefferson Barracks, Mo., respectively.

The practice, inaugurated in February, 1912, of separating, as far as practicable, prisoners convicted of purely military offenses from those convicted of statutory or common law crimes or misdemeanors was continued throughout the past fiscal year.

As in previous years, applications for clemency in the cases of prisoners undergoing confinement in the execution of sentences of general courts-martial added materially to the correspondence of the office. At the beginning of the fiscal year 138 applications for clemency, previously made, had not received final consideration, they having been referred to the commanding generals of military divisions or elsewhere in the course of investigation as to the merits of the cases. During the year 1,573 applications for clemency were received, but 61 of these were cases in which other applications were pending at the date of their receipt. Clemency was denied in 1,229 cases, the unexecuted parts of sentences were remitted in 103 cases, parts of the unexecuted sentences were remitted in 182 cases, and in 6 cases recommendation was made to the Department of Justice for parole under the provisions of the act of Congress approved June 25, 1910 (36 Stat. L., 819). Before final action had been taken on applications for clemency in their cases 4 general prisoners had been released upon expiration of sentence. At the close of the fiscal year 126 cases under consideration had not been acted upon because investigations as to their merits had not been completed.

The number of cases received does not represent the number of individual prisoners by whom, or in whose behalf, applications for clemency were made. In many cases as soon as one application is denied another is presented, as many as 9 consecutive applications having been received during the year in the case of one general prisoner. The 1,520 cases acted upon during the year were applications in the cases of 1,322 general prisoners, as against 1,597 applications in the cases of 1,402 general prisoners acted upon during the preceding year.

The unexecuted parts of sentences of confinement were remitted by the War Department in the cases of 8 general prisoners during the past fiscal year upon the recommendations of the commandants of the prisons who had been authorized, in order to give special recognition at suitable times to those who had gained the most meritorious records, to recommend for clemency on the Fourth of July and Thanksgiving Day of each year 2 general prisoners at the United States Military Prison and 2 at the Pacific Branch who had served not less than 18 months of their terms of confinement and who had the best records of conduct at the prisons.

In addition to the cases considered upon applications the unexecuted parts of sentences were remitted by the War Department for administrative reasons in the cases of 10 general prisoners without applications for clemency having been made in their behalf.

The number of applications for clemency acted upon by the commanding generals of the several military divisions and departments is unknown. The whole of the unexecuted parts of sentences were remitted by commanding generals in 16 cases, making a total of 129 cases in which the whole of the unexecuted parts of sentences of confinement were remitted by the War Department or by subordinate military authorities during the year. During the preceding year the whole of the unexecuted sentences were remitted by commanding generals in 39 cases, making a total of 162 cases in which the whole of the unexecuted parts of the sentences of confinement were remitted by the War Department or by subordinate military authorities during that year. It will be observed, however, that the numbers of remissions of sentences by division or department commanders, before shown, include only general prisoners in whose cases execution of the sentences of confinement had been begun and does not include cases in which the sentences of confinement were remitted by commanding generals at the time the records of the courts-martial were acted upon, the number of the cases of the latter class being unknown to this office.

CURRENT WORK OF THE ADJUTANT GENERAL'S OFFICE.

The following table shows either the source of receipt or the character of the cases received and formally recorded during the fiscal year ended June 30, 1913:

NUMBER OF CASES RECEIVED.

From the Commissioner of Pensions	166,276
From the Auditor for the War Department	19,376
From the Comptroller of the Treasury	51
From the Commissioner of the General Land Office	1,051
From the Civil Service Commission	271

From the General Staff and chiefs of bureaus of the War Department	7,441
From the Army at large	86,306
Beneficiary designations	13,637
Recruiting for the Army	9,479
Adjutants general of States	20
Militia of States and Territories	203
Clemency for general prisoners	3,265
From Union associations and volunteer soldiers' homes	1,000
From Confederate associations and homes and State pension officials	8,705
Applications for original discharge certificates	114
Applications for certificates in lieu of lost discharges	5,596
Applications for removal of charge of desertion	992
Remuster	6
All other cases, miscellaneous	62,702
Total	386,481

All of these cases, with the exception of 261, were disposed of during the year.

In addition to the 386,481 cases received and formally recorded, 8,655 requests for information concerning the whereabouts of individual officers and enlisted men or organizations of the Army, 2,750 requests for information relative to appointments in the Army or as cadets at the United States Military Academy, and 8,325 requests for blank applications and other forms or printed orders were received. These requests were answered or the blanks desired were supplied without any formal record of the cases being made in this office. Informal calls for information from the records were received from other bureaus of the War Department in 5,528 cases; 3,370 notices of desertion or dishonorable discharge of enlisted men were furnished to the accounting officers of the Treasury Department, and 556 miscellaneous cases were disposed of without having been formally recorded, making a total of 415,665 cases, recorded and unrecorded, handled by the office during the fiscal year. This was an average of 1,367 cases for each working day of the year, as compared with 1,071 cases for each working day of the preceding fiscal year.

The current work of the office was kept virtually up to date during the entire fiscal year, 88.9 per cent of all cases received during the year having been disposed of within 24 hours from the time they reached the office. The cases that required more than 24 hours for investigation and adjudication in the office were mostly complicated cases. They were disposed of as promptly as possible, usually within two or three days. The decrease in the percentage of cases disposed of within 24 hours from the time they reached the office—88.9 per cent, as compared with 95.6 per cent during the preceding fiscal year—was due to a great extent to the great increase in the number of calls for information from the records received from the Bureau of Pensions as a result of the Sherwood act. The average number of pension cases received daily increased from 142 in July, 1912, to 935 in October, 1912. It was impossible, with the office force provided by law, to dispose of all these cases within 24 hours from the date of receipt. However, they were disposed of as rapidly as practicable, and by May, 1913, the number of cases received from the Bureau of Pensions had decreased to an average of 245 daily.

The increase in the number of cases received during the fiscal year ended June 30, 1913, as compared with the preceding fiscal year, was due to the large increase (122,766) in the number of pension cases received. There was a decrease of 2,523 in the number of cases received from the Auditor for the War Department, 4,128 in those from the Army at large, and 6,547 in the cases relating to recruiting for the Army. There was also an increase of 2,194 in the number of requests for information from the records received from Confederate associations and homes and State pension officials, the increase occurring principally among the requests received from State pension officials. No separate record of these cases was kept, and, consequently, no statement as to the number of Confederate State pension cases received can be made.

The miscellaneous cases shown in the table include a wide range of subjects relative to disbanded armies and to the organizations and individuals composing those armies, and to former officers and enlisted men of the Army of to-day. These cases include a large correspondence with individual Senators and Representatives in Congress, as well as many reports for the use of congressional committees relative to pending or proposed legislation, involving the determination of the great variety of questions that constantly arise in connection with the history or status of military organizations and of individual officers and enlisted men. Among the miscellaneous cases are also included inquiries received from the descendants of soldiers of the Revolutionary War and the War of 1812, and from various patriotic societies relative to service in those wars. During the past fiscal year there were received 3,426 requests, involving 4,313 names, for records of service in the Revolutionary War, and 1,269 requests, involving 1,424 names, for records of service in the War of 1812.

Of the 5,528 informal calls received from other bureaus of the War Department, 4,739 were requests received from the Chief of the Quartermaster Corps for information from the records for use in connection with applications for headstones and marking the graves of deceased soldiers. Those requests involved 13,255 names.

The 13,637 beneficiary designations shown in the table were received in the office prior to March 1, 1913, on which date the recording of those designations in this office was discontinued. But little use is made of these designations in this office, the information contained in them being used in the office of the Chief of the Quartermaster Corps in cases of death of officers and enlisted men. It was because of this fact that the recording of these designations in The Adjutant General's Office was discontinued, and since March 1, 1913, they have been sent as soon as received directly to the office of the Chief of the Quartermaster Corps.

The distribution, as prescribed in paragraph 816, Army Regulations, of general and special orders, bulletins, and changes, to the Army was continued during the year. The following table shows the number of copies of orders, bulletins, and changes distributed during the fiscal year ended June 30, 1913:

General orders	831,000
Bulletins	357,000
Special orders, full copies	81,284
Special orders, extracts	56,340
Special orders, bulletins	66,570
Recruiting and enlistment circulars	37,000
Changes—Army Regulations, manuals, etc	644,479

During the past fiscal year 2,818,342 blank forms were distributed to the Army by this office, either directly or to the proper officers of the military divisions and departments for distribution by them, or were sold to the Organized Militia of the several States and the District of Columbia.

During the past fiscal year many pieces of mail matter intended for officers and enlisted men of the Army and directed to them in care of The Adjutant General's Office were readdressed to them. No record of the quantity of mail so readdressed was kept.

PERSONAL IDENTIFICATION SYSTEM.

The use of finger prints, photographs, and personal descriptions as a means of personal identification was continued during the past fiscal year. At the close of that year 250,578 finger-print records had been received in this office. Of these, 75,873 were made in cases of reenlistment in which records made during the previous service were on file. As was stated in preceding annual reports of this office, it has been found to be necessary to obtain finger-print records of men reenlisting, although finger-print records of these men made during a prior service are on file. This is necessary for the purpose of detecting cases, several of which have been discovered, in which a man with a discharge certificate in his possession claimed the service represented by, and enlisted under the name appearing in, that discharge certificate, although it was established beyond doubt when his finger prints were received in this office that he was not the man he claimed to be. On June 30, 1913, this office had on file finger-print records of 174,705 individuals who were then or had been previously enlisted men in the Army.

During the fiscal year ended June 30, 1913, 256 cases of fraudulent enlistment by former deserters, general prisoners, and others were discovered through the operation of the finger-print system of personal identification. During the preceding year the number of cases of fraudulent enlistment discovered through this system was 337, and during the fiscal year 1911 the number was 326. Of the 256 cases of identity discovered during the past fiscal year, 23 had been withdrawn from military control when the discovery was made. Of the remaining 233 cases, 20 were held in service, 185 were dishonorably discharged and confined for various periods by sentences of general courts-martial, 10 were discharged without honor, 5 were discharged on surgeon's certificate of disability, and in 13 cases no report of final determination has been received.

The finger-print records and photographs have not only led to the apprehension of criminals who have enlisted in the Army for the purpose of escaping detection, but have doubtless deterred criminals from attempting to enter the Army for that purpose.

INDEX-RECORD CARD WORK.

The index-record card work performed during the fiscal year consisted of the reproduction of 435,884 individual-service records of Confederate troops in service during the Civil War. This work was prosecuted as rapidly as the condition of the current business would permit.

The whole number of index-record cards prepared up to and including June 30, 1913, comprised 50,821,618 military cards and 7,914,111 medical cards, a total of 58,735,729 cards. The numbers of index-record cards shown above do not include medical cards pertaining to the Regular Army, most of which are current medical-report cards received in the Surgeon General's Office and transmitted to this office after they have become noncurrent. There are approximately 9,850,000 medical cards, including those of the Regular Army, now on file in this office.

The total number of index-record cards prepared up to June 30, 1913, includes 7,339,219 Confederate military cards. These cards, as stated in preceding annual reports, were prepared in the process of compilation of the roster of officers and enlisted men of the Union and Confederate armies, pursuant to the act of Congress approved February 23, 1903 (32 Stat. L., 884), and represent entries on the records and not the number of different individuals.

OFFICIAL RECORDS OF THE UNION AND CONFEDERATE ARMIES.

Four sets of the Official Records of the Union and Confederate Armies, consisting of 512 books and 712 atlas plates, were distributed during the fiscal year, upon orders received from Senators, Representatives, and Delegates to the Fifty-seventh Congress, to permanent libraries and educational institutions designated by them under the provisions of the act of Congress approved March 3, 1903 (32 Stat. L., 1145).

No sale of the Official Records of the Union and Confederate Armies, or any part thereof, was made by The Adjutant General's Office during the past fiscal year.

ROSTER OF OFFICERS AND ENLISTED MEN OF THE UNION AND CONFEDERATE ARMIES.

The compilation of the "Complete roster of officers and enlisted men of the Union and Confederate Armies," authorized and required to be compiled by a provision contained in the legislative, executive, and judicial appropriation act approved February 25, 1903 (32 Stat. L., 884), was continued during the year. The compilation of this roster did not progress as rapidly during this year as in preceding years, because the reduction in the clerical force of the office, referred to in another paragraph, fell chiefly on the class of clerks engaged in this kind of work.

The Union part of the roster has long since been virtually completed and the only work that remains to be done is that connected with the compilation of the Confederate service records. The work on the Confederate records has progressed so far that the clerical force is now engaged in reproducing the records of Virginia organizations in the Confederate service. It is probable that the work on the records of those organizations will be completed during the current fiscal year, leaving to be done in connection with the Confederate part of the roster only that work relating to Confederate organizations that were not credited to any particular State. There also remains considerable work to be done in connection with the reproduction of the Confederate hospital records. As was stated in the last annual report, the reproduction of the records of men in service from any one State will not be completed until the Confederate medical records have been reproduced, because records of service in the Confederate Army are to be found in many instances on the medical records only, which is due to the incompleteness of the collection of the Confederate military records in the possession of the War Department.

Preceding annual reports of The Adjutant General of the Army contain detailed statements with regard to the methods adopted to make the collection of Confederate records in the possession of the War Department as complete as possible, and the method of reproducing those records by the index-record card system as a preliminary step in the compilation of the roster of officers and enlisted men in the Confederate Army.

Consideration of the manner of compiling the service records of the Regular Army (Federal) has not yet been taken up. It is probable, however, that the compilation will be made, as soon as the work on the Confederate part of the roster has been completed, in the same manner as both the Union (volunteer) and the Confederate service records were compiled.

The legislation under which the compilation of this roster is being made does not require its publication, but Congress no doubt intended that the authority necessary for the publication should be given when the work of compilation should have been completed or should have been sufficiently advanced to justify the beginning of the publication. It is believed that that work has advanced sufficiently to warrant some consideration in the near future of the question of the publication of the roster. This matter will be taken up in a special report, with a view to obtain legislative authority for, and to determine the general style of, the proposed publication of this roster.

MEDALS OF HONOR.

During the fiscal year ended June 30, 1913, there were 10 medals of honor issued by the War Department. Of these, 2 were issued to replace medals of the old design and 8 were original issues of medals awarded during the year. The whole number of awards of the congressional medal of honor up to and including June 30, 1913, was 2,619. Medals of honor are issued by the War Department under the provisions of the act of Congress approved April 23, 1904 (33 Stat. L., 274).

CAMPAIGN BADGES.

A summary of the campaigns for which the issue of campaign badges has been authorized is published in General Orders, No. 129, War Department, August 13, 1908. The issue of those badges, which are intended "to commemorate services which have been or shall hereafter be rendered in campaign," was authorized by General Orders, No. 4, War Department, January 11, 1905.

During the past fiscal year 243 names were added to the lists of officers and enlisted men who were found to be entitled to campaign badges, making a total of 40,688 officers and enlisted men found to be entitled to those badges. Of these, 29,632 were entitled to Philippine campaign badges, 7,207 to Spanish campaign badges, 1,616 to China campaign badges, 1,810 to Indian campaign badges, and 423 to Civil War campaign badges.

The campaign badges are issued as articles of uniform to officers and enlisted men in service by the Chief of the Quartermaster Corps on data furnished by The Adjutant General's Office.

It was decided by the Secretary of War in 1908 that campaign badges may be issued to members of the Organized Militia who are entitled to wear the uniform of the United States Army and whose service conforms to the requirements of General Orders, No. 129, before cited. Since the date of that decision (May 26, 1908) data have been furnished to the Chief of the Quartermaster Corps in the cases of approximately 1,775 members of the Organized Militia who made application for campaign badges.

In addition to the campaign badges before referred to, the issue of a service badge, to be known as the Army of Cuban Pacification badge, was authorized by General Orders, No. 96, War Department, May 11, 1909. Data have been furnished to the Chief of the Quartermaster Corps in the cases of 6,207 applications for those badges since the date of the order authorizing their issue. The Army of Cuban Pacification badge is issued to officers and enlisted men who were in service on May 11, 1909, or thereafter, and who served as officers or enlisted men in Cuba with the Army of Cuban Pacification between October 6, 1906, and April 1, 1909.

The issue of a certificate of merit badge and ribbon to each officer and enlisted man in the service to whom a certificate of merit had been or might thereafter be issued was authorized in General Orders, No. 4, War Department, January 11, 1905, as amended in General Orders, No. 129, War Department, August 13, 1908. The badge and ribbon prescribed by these orders are a part of the uniform, and are to be worn in the manner prescribed for campaign badges. At the close of the last fiscal year 194 certificate of merit badges had been issued.

PHILIPPINE SERVICE MEDAL.

The issue of "Philippine service medals," so called, is authorized by the act of Congress approved June 29, 1906 (34 Stat., L., 621). Those medals are issued by the Chief of the Quartermaster Corps on data furnished by The Adjutant General's Office. They are, under the terms of the act cited, "to be presented to each of the several officers and enlisted men and families of such as may be dead, who, having volunteered and enlisted under the calls of the President for the War with Spain, served beyond the terms of their enlistment to help to suppress the Philippine insurrection, and who subsequently received an honorable discharge from the Army of the United States, or who died prior to such discharge."

Up to and including June 30, 1912, statements as to whether or not service upon which the application was based was such as to authorize the issue of that medal had been made by The Adjutant General's Office in 7,141 cases. During the past fiscal year similar statements were made in 134 cases, making a total of 7,275 applications for

Philippine service medals received since the enactment of the legislation before cited. In 6,299 of these cases the service was found to be such as to come within the provisions of the law, and in the remaining 976 cases the service was found to be such as to preclude the issue of the medal. In a great majority of the cases of the latter class the applicants, or the persons on account of whose service applications were made, did not enter the service under a call of the President for the War with Spain, or did not serve in the Philippine Islands, or did not serve in the Philippine Islands after the termination of the War with Spain, or the service was not terminated honorably.

In the case of each of the applications received the Chief of the Quartermaster Corps was advised with regard to the record of the applicant or the person on account of whose service the application was made.

CIVILIAN EMPLOYEES OF THE ADJUTANT GENERAL'S OFFICE.

The legislative, executive, and judicial appropriation act for the fiscal year beginning July 1, 1913, required a reduction of 5 per cent in the number of War Department employees. In order to accomplish this the Secretary of War directed a reduction in The Adjutant General's Office of 49 clerks at $1,000 per annum and 1 assistant messenger, which was 8 per cent of the authorized force. This reduction was accomplished by allowing the vacancies that occurred during the latter part of the fiscal year 1912 and the year 1913 to remain unfilled; in this way the discharge of any employee was avoided.

Of the vacancies in the clerical force, not including 4 transfers to other bureaus of the War Department, 37 occurred during the fiscal year ended June 30, 1913, 13 having been due to death and 24 to resignation. The average age of those who died was 63 years and their average length of service 34 years. The average length of service of those who resigned was 10 years. Classified by salaries, these vacancies were as follows: 6 at $1,800; 5 at $1,400; 18 at $1,200, and 8 at $1,000 per annum, an average annual salary of $1,280.

The present salaries of the clerical force of the office were established by the act of March 3, 1853 (R. S., sec. 167), and no change in them has been made since that time. In order to provide more adequate compensation for the chief clerk and some of the other principal clerks of the office occupying positions of responsibility and trust, and also to offer more inducements to competent clerks to remain in the office, the estimates of appropriations for the office for the next fiscal year as submitted to the Secretary of War contain recommendations for some increases in salaries, to be provided by a slight reduction in the number of clerks in the lower grades in order not to increase the present appropriation. The net reduction amounts to $1,560.

The authorized clerical force at present, by classes, is as follows:

1 chief clerk, at $2,000 per annum.
10 chiefs of division, at $2,000 per annum.
48 clerks of Class IV.
64 clerks of Class III.
94 clerks of Class II.
232 clerks of Class I.
89 clerks of Class $1,000.

It will be seen that the proportion of lower grades is very large and that, consequently, a reduction in the number of clerks in those grades and an increase in the number in the higher grades will give greater chance for promotion.

The faithful and efficient performance of duty by the officers, clerks, and messengers in this office continues to be worthy of mention. As in former years, the varied and complicated functions of the office have been promptly and accurately carried on through their conscientious work.

GEO. ANDREWS,
The Adjutant General.

REPORT OF THE INSPECTOR GENERAL.

REPORT OF THE INSPECTOR GENERAL.

War Department,
Office of the Inspector General,
Washington, August 27, 1913.

From the Inspector General of the Army.
To the Secretary of War.
Subject: Annual report for fiscal year that ended June 30, 1913.

I submit the following report in relation to the duties performed by the Inspector General's Department during the fiscal year that ended June 30, 1913:

PERSONNEL OF THE DEPARTMENT.

The number of officers in the permanent corps is the same as was reported last year; namely, one brigadier general and two colonels. During much the greater part of the year one of the colonels was not on duty in the department, having been detailed for duty at the Army War College, Washington, D. C.

One colonel, four lieutenant colonels, and nine majors were doing duty as inspectors general under the provisions of the act of February 2, 1901; and four acting inspectors general, consisting of one colonel, one lieutenant colonel, and two majors, were doing duty under the act of June 23, 1874.

These officers performed the numerous, varied, and delicate duties pertaining to their position with commendable zeal, efficiency, and impartiality.

INSPECTIONS.

The inspection of the Military Establishment during the past fiscal year was approximately complete and included the Military Academy, the service schools, the garrisoned posts, camps of maneuver and instruction, tactical inspections of troops, the staff offices at department headquarters, the general hospitals, the arsenals and armories, the depots of the staff departments, the recruit depots and main recruiting stations, the military prisons, the biennial inspections of such ungarrisoned posts and national cemeteries as were due, the required inspections of Army transports upon arrival at and departure from ports, the cable boats, mine planters, and harbor boats of the Quartermaster Corps. Numerous inspections of unserviceable property presented for condemnation and the inspections of the money accountability of all disbursing officers of the Army were also made. The prescribed annual inspection of the Soldiers' Home, District of Columbia, and of the headquarters and branches of the National Home for Disabled Volunteer Soldiers, from Maine to California, was also included in the year's work.

All irregularities and deficiencies noted in these inspections were reported in due and prescribed form, and the necessary steps were promptly taken to secure speedy and proper remedial action.

In addition to the numerous and varied inspections regularly assigned to the department and enumerated above, the officers of the Inspector General's Department made a large number of special investigations during the year under orders of the War Department and of department commanders.

THE LINE OF THE ARMY.

It has been recommended, and it is believed wisely, that the mobile troops of the Army be kept at war strength at all times. This, it appears, could be accomplished under existing laws and with small additional expense by transferring the Philippine Scouts to the Philippine Constabulary. This plan would place the cost of their maintenance upon the Philippine Government, and the 5,732 men now required for that force could be added to the mobile army, thus bringing the strength of the Military Establishment almost up to the 100,000 men authorized by the act of February 2, 1901.

It is believed that the regiments now in the Philippines should be brought back to the United States when they have completed their tour of service there, and that they should be replaced by regiments organized since 1901.

Of the regiments now in the Philippines, the Seventh Cavalry has made a fine record since its organization, July 28, 1866, and has always been distinguished for its esprit and for the regimental loyalty of both its officers and enlisted men. It is known throughout the world, and certainly nothing should be done that would practically destroy it, as would be the calamitous effect of disorganizing it by transferring all of its officers, many of whom have served with it for a number of years. As much may be said of the Eighth Cavalry, also organized in 1866; of the Eighth Infantry, which was organized in 1838 and fought throughout the Mexican War, the Civil War, in subsequent Indian campaigns, and the War with Spain; and of the Thirteenth and Fifteenth Infantry, which were organized in 1861 and fought through the Civil War and subsequent wars. The Twenty-fourth Infantry was organized in 1866 and has participated in Indian campaigns, the War with Spain, and service in the Philippines. There being only two infantry regiments of colored men, both with practically the same history, if it is intended to keep one such regiment in the Philippines it might as well be the Twenty-fourth as the Twenty-fifth.

It would seem to be in the interest of service pride and efficiency to bring these regiments home at the end of their period of Philippine service and replace them by regiments organized since 1901, which, through no fault of their own, have had no war service and therefore have no history. The change can not well be effected by any other transfer than bringing the regiments back to the United States, because only in that way can the troop and company records and the soldiers identified with the regiments be held together. It is presumed, of course, that the regiments now in the Philippines were selected in the first place because they were first on the roster for Philippine service, and it is a good time to make the change when they complete that service. If necessary, the roster should be departed from in order to secure regiments of higher numbers than 10 in the Cavalry and 25 in the Infantry for Philippine service.

It is proposed to organize the regular Infantry within the continental limits of the United States, in case of war, into three divisions, which will require six regiments of Field Artillery; the regular Cavalry within the same limits will form two divisions, requiring at least one regiment of Horse Artillery; the field Army will also require at least one regiment of heavy Field Artillery—making in all eight regiments of Field Artillery.

It is understood that as soon as quarters are available one battalion of Mountain Artillery will be sent to Panama, which will leave but three and one-half regiments of Field Artillery in the United States. It is therefore apparent that the Field Artillery should be increased by four and one-half regiments, or the equivalent in battalions.

This matter is recommended for consideration by the General Staff in connection with any proposed legislation.

It is recommended that the Field Artillery Board now stationed at Fort Riley, Kans., be transferred to Fort Sill, Okla.; that the commandant of the School of Fire be a member of that board; that this reconstituted board direct and control the Field Artillery policy, including the methods of the School of Fire; that an officer of high rank be detailed to supervise and coordinate the work of the School of Musketry and School of Fire for Field Artillery, both of which are now located at Fort Sill.

It is the opinion of this office that it would be in the interests of the Army as a whole if some of the officers of each arm of the service were detailed to serve for stated periods with the troops of other arms. The peculiar duties, capabilities, and limitations of each arm would, as a result, be better known by the officers of the other branches. Such knowledge is fully as desirable as a knowledge of staff duties, which officers are now detailed from the line to acquire as a necessary part of their professional education.

TACTICAL INSPECTIONS.

The year's work showed the continued and increasing value of these inspections, and their tendency to greatly promote and increase the efficiency of the troops in every way is generally reported.

The tactical inspections are the most important pertaining to troops, and amply justify the heavy additional work they entail, as they make more apparent the deficiencies in personnel, material, administration, and supply than any other form of inspection. When the remedial action taken on defects and deficiencies has had time to be effectively applied, the beneficial results of these inspections will be more apparent.

The present provisions for the annual tactical inspections (par. 904, Army Regulations) contemplate, whenever practicable, that these inspections be made when the troops of the three arms are assembled for field exercises. This principle should be insisted upon for the educational benefit of higher commanders.

FIELD TRAINING.

Reports of Cavalry tactical inspections show that more instruction and practice are needed in issuing field orders, especially verbal orders, and in the training of Cavalry in "information and security."

Also, it appears that many officers of the different arms do not possess a good working knowledge of the principles laid down in the Field Service Regulations, and that they give too little study to the tactical handling of their own proper units under the varying conditions of actual service. This can be corrected in the postgraduate work in garrison by simpler problems, so as to bring out the principles of patrolling and combat of small units.

It is recommended that in maneuvers in the insular possessions the Army and Navy cooperate in the solution of problems based upon conditions that would probably exist in actual war.

EQUIPMENT.

Inspections have shown that there is no uniform practice nor guide as to the field equipment. It is seldom that two or more organizations are similarly equipped when turned out for inspection in the field, nor do any two commanding officers appear to agree as to what constitutes the field equipment. This absence of a standard field equipment results in many different interpretations of existing orders on the subject and usually causes an increase in the number of articles deemed to be necessary, with a constant increase of the wagonloads. Troops very rarely turn out without considerable excess baggage.

Very few criticisms of the new Infantry equipment have been received. The new Cavalry equipment is still undergoing test.

Considerable complaint as to the poor quality of the material of the shelter tent and wagon cover has been reported.

Reports show that the wear and shrinking of the flaps which close the cartridge pockets of the web cartridge belts and the pulling out of the eyelets to which the haversack is attached are the principal causes of the condemnation of those belts. It is suggested that flaps be supplied, so that defective ones can be replaced, as I understand is now done in a few scout organizations. Also, the eyelets should be replaced by metallic hangers. A shorter belt for native troops is recommended by the inspector general, Philippine Department.

THE RATION.

There is no uniformity in the ration carried by troops in the field in peace maneuvers. The components vary greatly in kind and amount. Existing regulations authorize commanding officers to determine the character of the subsistence appropriate for the particular service required, but reports show that the results obtained by the above regulation are not satisfactory. The garrison ration is composed of more than 40 different components and is not suitable except for garrison or permanent camp. There should be a designated ration for issue in kind in the field in time of peace.

Inspections of Field Artillery commands under orders to use the haversack ration developed that—

First. The Quartermaster Corps did not, for all the organizations of the command, have a uniformly packed haversack ration.

Second. That there were no suitable containers supplied to the command for carrying such components of the haversack ration as were issued in bulk by the Quartermaster Corps.

INSTRUCTION.

Reports indicate an improvement in the instruction of troops, especially in matters connected with field efficiency.

The small progress made in the development of bayonet combat is believed to be due to two causes—the lack of a suitable equipment and the scarcity of officers with a practical knowledge of the principles of bayonet fencing. Practical instruction for company officers should be included in the instruction given at the School of Musketry. Special attention should be given to this matter at the United States Military Academy.

RECRUITING.

Reports received in this office show that at many stations in various parts of the country there has been a marked decrease in the number of accepted applicants for enlistment as compared with the preceding year. Various causes were assigned to account for this fact, the chief one being the seven-years enlistment period. Recruiting officers and members of recruiting parties have carefully explained to applicants the nature of the enlistment contract with reference to service with the colors and in the reserve, but the applicants are not satisfied and frequently express themselves as unwilling to enlist because of the reserve feature, which places them under obligations for too long a period. One inspector reports that " careful inquiry of 425 former soldiers eligible for enlistment in the Army reserve, during the month of April, 1913, resulted in enlisting only 3 men."

The system of examination and elimination of unfit applicants at the recruit depots is excellent, as is also the system of recruit training. A comparison between the civilian applicant and the recruit who has finished the regular course is convincing as to the quality of the work.

UNIFORM.

There has been a great deal of criticism of the present method of issuing clothing. It is believed that the failure of organization commanders to keep the required records up to date is largely responsible for the trouble, which usually results in men being issued the wrong sizes, necessitating numerous exchanges.

It is believed, however, that the system of issues might well be modified so as to permit of issues to individuals, settlement to be made at the end of the month on proper vouchers.

Complaints continue as to the lack of uniformity in articles of clothing, due to the issue of old stock of different patterns.

The cotton service uniform is still unsatisfactory, and the new campaign hat is objectionable on account of stiffness of the brim. The material of the poncho is of poor quality; the sweater is too light in weight and not sufficiently roomy either for warmth or comfort.

There are many complaints that the olive-drab shirt shrinks excessively. More shrinkage should be given the material before manufacture.

Reports received show that at many posts there are stocks of shoes of obsolete pattern on hand for issue; and at one post there were as many as 11 different kinds—3 kinds of black and 8 of russet. One variety of these shoes was purchased as far back as 1889—24 years ago. In some cases the issue price of the old shoes has been reduced to less than half their original cost, in order to facilitate their being absorbed by the service. These shoes should be sold, as the present situation is most unsatisfactory. From reports of sales by other branches of the Government service, it is believed that the sale of these shoes, instead of their issue at the very low price fixed, would be advantageous to the Government as well. The elimination of the old patterns would permit the issue without further delay of the new standard shoe, according to the orders prescribed, which contemplate its issue.

PUBLIC ANIMALS.

Shortage of public animals in a number of posts and commands has been reported. The shortage does not appear to be due to indisposition in any quarter to supply them promptly, but to the fact that it is apparently becoming a matter of more or less difficulty to procure a sufficient number of suitable animals to meet the requirements of the service.

A very large majority of the reports show that favorable results have been obtained from feeding and watering the animals three times a day. In view of this fact, it is believed that the promulgation of orders requiring all public animals to be fed and watered three times a day would be advisable.

REMOUNTS.

For several years after the establishment of a remount depot at Fort Keogh, Mont., there was a good deal of complaint from various sources in the West that the horses supplied therefrom were not desirable. It has been stated in explanation of this that in the beginning the horses were purchased for the purpose of getting the horse breeders of that section interested, so that they would ultimately produce a type of horse in every way suitable for cavalry purposes. The horses now being shipped from the depot are a great improvement over those of the first shipments and the 3 and 4 year olds now on hand. eventually to be shipped, are of a still higher grade.

The chief complaints about the remount system are as follows: 1, excessive cost; 2, issued too young; 3, those from Keogh not up to standard; 4, depots, though having ample capacity, do not maintain a sufficient number of remounts to meet the requirements of the service in peace.

An advantage not to be overlooked in connection with the maintenance of depots is that they may help to perpetuate the breeding of the types needed and will become collecting points of horses for the demands of war.

The training of remounts in organizations appears to be making satisfactory progress.

OFFICERS' MOUNTS.

It seems desirable that a descriptive card for officers' mounts should be prepared, which will show not only the general description, as does the present descriptive card for public animals, but the name of the officer who first purchased the horse as his mount, the name of the commanding officer who passed him, and the successive transfers and approvals. The history of an officer's mount frequently becomes obscure by reason of the animal passing from one owner to another, so that it is sometimes difficult to get the information now necessary for determining whether or not a horse is a "suitable mount." On changes of station the descriptive list should be sent to the commanding officer of the new station, who should make proper notations on it and send it to the quartermaster, who would then know whether or not he should issue forage for this particular animal.

WHEEL TRANSPORTATION.

For some time past there has been a distinct shortage of horses, mules, and wagons in the Army. The shortage of animals, it is thought, is due to the difficulty in securing them at normal prices. This fact, and the constant improvement in the efficiency of motor trucks and automobiles, point to the necessity of supplementing wagon transportation by self-propelling vehicles. Therefore it is believed that the gradual introduction of the latter into use in our military service is necessary, and that now, while peace prevails, is the appropriate time to begin, as familiarity with their use will be imperative in time of war.

Recent reports from the Philippine Department on the use of the autotrucks of the Quartermaster Corps in the field inspections held during the year clearly corroborate the claim that they are necessary, economical, and essential as a vehicle of Army transportation for troops in the field on the line of supply.

The number of spring wagons for purely post transportation is generally in excess of the allowance prescribed in Army Regulations.

POST OFFICERS.

It frequently happens that the business of a post, especially when garrisoned by one battalion, the supply of troops and upkeep of buildings and grounds, are placed in the hands of a second lieutenant, an officer of very limited service. Many of these young officers acquit themselves most creditably; still, such work when practicable should be assigned to experienced officers. These important duties of supply, which frequently require that independent judgment which comes from experience, are given to officers of the junior grade, while administrative duties under the immediate supervision of the commanding officer and requiring practically no independent action are given to officers of the senior grade. This is a defect in organization which requires remedy.

SIGNALING.

Signaling by the Cavalry and Infantry with the authorized visual equipment has never been satisfactory in the service. It is difficult to learn, easy to forget, and its slowness and great liability to inaccuracy, as well as the ever-present probability of its being interpreted by the enemy, unite in rendering it unreliable. The semaphore system is easy to learn and remember, speedy, and accurate. It is said to be practicable to make 50 per cent of a company expert in its use, whereas it has heretofore been difficult to get even one or two expert men in a company. The ease of acquiring and retaining expertness enables men to use the two-arm semaphore system among themselves for their own convenience as occasion may require, and it is evident that when almost any soldier can send messages to almost any other soldier with speed and accuracy and with the certainty of being correctly interpreted information can be quickly transmitted in any direction.

Reports received confirm this opinion and show that Cavalry and Infantry troops have not demonstrated the ability to communicate by flags that is necessary for field duty, but that the Field Artillery troops have been able to very successfully utilize the semaphore code authorized by General Orders, No. 15, War Department, 1913, and communicate at a distance greater than a mile with accuracy and at a very rapid rate. It is believed that this system is well adapted for use by the Cavalry and Infantry troops also, at short distances.

WRIST WATCHES.

In some of the Field Artillery the scouts have been reported as not supplied with watches, although required for the efficient performance of their duty. Steps have been taken to remedy this deficiency in the Field Artillery. Scouts of Infantry and Cavalry should also be supplied.

FIELD GLASSES FOR FIELD SERVICE.

The field equipment should be supplemented by the issue of a proper supply of field glasses to sergeants and scouts.

THE WELDON RANGE FINDER.

Some of the officers and noncommissioned officers who have taken the course at the School of Musketry are said to have confidence in the Weldon range finder, but it has been reported that in combat exercises little or no use is made of it. One inspector says:

> I am convinced that in the hands of a man possessing some little skill in its use it is more reliable than "the estimation of a man who is fairly good at estimating distances."

Many officers, it is reported, consider it of but little value. The vexed question as to its utility should be definitely settled by the School of Musketry.

PUBLIC FUNDS.

Inspections show that generally the laws and regulations have been carefully observed in the management of public funds, which have been efficiently administered.

The present form of check book has been found to be unsatisfactory. It is believed that each sheet of checks should be supplied with a duplicate carrying the printed number and other identifying marks of the original, on which a carbon record of the check issued should be kept. At present the inspector has no assurance that the records made on the register of checks are identical with the original checks issued.

COMPANY FUNDS.

A large number of inspections of such funds has developed the fact that the cash on hand and the value of property bought from the fund vary greatly in different organizations; that in some cases these funds greatly exceed the wants and needs of the organization; that organization commanders are sometimes too much occupied in business and financial transactions to give the attention required for the development of the military efficiency of their commands; that the difference in the number of luxuries enjoyed by two organizations of the same command, due to differences in the value of the company funds, tends toward discontent and discrimination in the treatment of enlisted men in the same command; that the large funds accumulated in the manner indicated are not and can not be expended for the benefit of the enlisted men who accumulated such funds, due to their separation from the organizations.

The possession of large amounts of property by organizations of the mobile Army has the additional objection of requiring the expense of transportation, or the storage of same when troops are ordered to take the field, or upon change of station; and additional care is thrown upon the organization commander, who is already responsible for large quantities of Government property.

Inspectors general have been directed to investigate the entire subject and make recommendations with respect thereto.

BUSINESS METHODS OF STAFF DEPARTMENTS.

The business management of the various staff departments appears to be satisfactory.

REQUISITIONS.

Inspection reports show a good deal of complaint about delay in getting requisitions filled and the articles forwarded. These complaints relate principally to requisitions for quartermaster property of various kinds, but some of them relate also to requisitions for ordnance and ordnance stores, medical stores, etc. Investigation showed that a frequent cause of delay was due to the necessity of returning the requisitions from depots to posts for information necessary to properly fill them.

PAPER WORK.

Inspectors report that with few exceptions paper work at posts is being kept down, post commanders, as a general rule, carrying on post business by personal interviews and brief memoranda, rather than by letters, etc.

It is recommended that at small posts the filling out and filing of record cards be not required. The index cards and document file are ample, and the record cards make just so much unnecessary work.

From the Philippines comes the report that envelope, form 410, is too small to contain several record cards (with accompanying papers) pertaining to the subject; that document file, form 411, is too small for many documents with inclosures, and has to be cut and used as a wrapper; and that forms 410 and 411 should be made with bellows edges, as well as in the shape now issued, so as to meet these defects. It is so recommended.

DECISIONS.

Inspectors report that War Department decisions contained in indorsements are not always seen by the line officers whose duties they affect, and who should have knowledge of the decisions, as they must be governed by them. This might be remedied by having the decisions published in circulars when they reach department headquarters, so that each officer concerned could receive a copy.

INFANTRYMEN'S FEET.

An improvement during the year in the care of infantrymen's feet, with resultant increase in marching capacity, is reported by inspectors.

DESERTIONS.

Reports show the usual variation in the number of desertions from posts and organizations. In some it is quite large; in others the evil has practically ceased.

GUARDING PRISONERS.

With few exceptions reports indicate that the directions of the Secretary of War relative to the parole and probation of prisoners and reducing the number working under guard are being carried out.

DISCIPLINE.

The Army seems to be a well-disciplined body, no criticisms on that score having been received.

TRANSPORTS.

The transports at the base and port of embarkation, Galveston, Tex., are reported as deficient in life-saving appliances, boats, and rafts; but that they are otherwise prepared to receive and transport troops in safety and with reasonable comfort, being clean, well painted, and sanitary.

COOKS AND BAKERS TRAINED AT SERVICE SCHOOLS.

The results of the instruction which cooks and bakers receive at the service schools are having their effect now in the service in the improvement in company messes. A great fault of company cooks in the past has been wastefulness. This fault is checked at the schools for bakers and cooks and the men are taught how to make savory dishes out of material that was formerly wasted and went into the garbage can. The result is that the troops now have larger funds, are better fed, and purchase from the company funds various articles for their amusement, comfort, and enjoyment, which 20 years ago were unknown among them.

COOKS FOR REGIMENTAL DETACHMENT.

Attention has been called to the fact that, as at present organized, a regimental infantry detachment consists of 53 men, but the organization does not provide a cook. It seems desirable that a cook be added to the organization and that legislative action be sought to have the regimental detachment made a separate organization.

E. A. Garlington.

REPORT OF THE JUDGE ADVOCATE GENERAL.

REPORT OF THE JUDGE ADVOCATE GENERAL.

OCTOBER 15, 1913.

SIR: I submit the following annual report of the Judge Advocate General's Department for the year ending June 30, 1913:

Number of trials by general courts-martial.

Commissioned officers		33
Convictions approved	25	
Convictions disapproved	1	
Acquittals approved	2	
Acquittals wholly disapproved	4	
Awaiting action of War Department	1	
Cadets		7
Convictions approved	5	
Convictions wholly disapproved	1	
Acquittals approved	1	
Enlisted men		5,121
Convictions approved	4,755	
Convictions wholly disapproved	70	
Acquittals approved	271	
Acquittals wholly disapproved	25	
General prisoners		48
Convictions approved	46	
Convictions wholly disapproved	1	
Acquittals approved	1	
Total		5,209

The statistics as to trials by general courts-martial in recent years are as follows:

	1907	1908	1909	1910	1911	1912	1913
Commissioned officers tried	32	28	43	30	42	29	33
Cadets tried	2	1	2	4	5	10	7
Enlisted men tried	3,763	3,994	5,449	5,127	3,756	4,343	5,121
General prisoners tried	45	52	56	45	48	53	48
Commissioned officers dismissed	4	3	10	7	6	6	8
Cadets dismissed				2		6	2

The number of trials of enlisted men by general courts-martial was 6 per cent of the average enlisted strength of the Army in 1907, 6.2 per cent in 1908, 7.4 per cent in 1909, 6.98 per cent in 1910, 5 per cent in 1911, 5.2 per cent in 1912, and 5.8 per cent in 1913.

Additional general court-martial statistics.

Charges received recommending trial by general courts-martial	5,546
Charges referred for trial by general courts-martial	5,193
Charges returned for trial by inferior courts-martial	215
Charges upon which no trial ordered	138
Defective charges requiring amendment before reference	2,117
Cases in which proceedings returned for revision	397
Enlisted men dishonorably discharged as result of trial	2,653
Above cases in which dishonorable discharge was authorized only because of five previous convictions	412
Amount paid enlisted men as reporters	$202.99

Number of trials by inferior courts-martial.

	Summary.			Garrison.			Regimental.		
	Convicted.	Acquitted.	Total.	Convicted.	Acquitted.	Total.	Convicted.	Acquitted.	Total.
Enlisted men	38,702	1,023	39,725	189	47	236	41	7	48
General prisoners	92	3	95	8		8			

CLASSIFICATION OF OFFENSES TRIED BY ALL COURTS-MARTIAL.

The following table shows the number of approved convictions of different offenses by all courts-martial, classified according to the nature of the offense.

Article of war.	Description of offense.	Number of convictions.		
		Officers.	Enlisted men.	General prisoners.
	Offenses relating to public property:			
16	Wasting ammunition		5	
17	Selling clothing and accouterments		180	
17	Losing or spoiling horse or arms		56	
17	Losing or spoiling accouterments or clothing		520	
62	Abusing public animals		217	2
62	Pawning and disposing of clothing		63	
62	Losing arms, accouterments, stores, or other property		170	
62	Destroying or spoiling public property		60	6
	Other offenses relating to public property under sixty-second article of war	1	240	
	Offenses against constituted authority:			
20	Disrespect to commanding officer		47	
21	Disobeying superior officer	1	132	
21	Offering violence to superior officer		3	
24	Disobeying noncommissioned officer while quelling frays, etc.		5	
62	Disobedience of standing orders or regulations	1	4,376	23
62	Disobedience of or failure to obey commissioned officer		961	
62	Disobedience of or failure to obey noncommissioned officer		3,070	7
62	Disobedience of or failure to obey sentinel		87	
62	Disrespect or insulting language or insubordinate conduct toward a commissioned officer	3	296	2
62	Disrespect or insulting language or insubordinate conduct toward a noncommissioned officer		2,606	20
62	Disrespect or insulting language or insubordinate conduct toward a sentinel		120	5
62	Resisting arrest by military authorities		126	
62	Breach of arrest		1,541	
62	Escape or conspiring to escape from confinement or sentinel		106	37
62	Other offenses against those in authority	4	573	13
	Offenses against subordinates:			
62	Abuse by officer or noncommissioned officer of authority over a subordinate		23	
	Conduct unbecoming an officer and a gentleman:			
61	Financial irregularities	3		
61	Other irregularities	3		
62	Fraudulent enlistment		300	
62	Carrying concealed weapons		18	1

Article of war.	Description of offense.	Number of convictions.		
		Officers.	Enlisted men.	General prisoners.
	Offenses by guards:			
39	Leaving post	....	80	....
39	Sleeping on post	....	121	....
40	Quitting guard	....	121	....
62	Sentinel allowing a prisoner to escape	....	64	....
62	Sentinel sitting down on post	....	158	....
62	Sentinel permitting prisoner to obtain intoxicating liquor	....	18	....
62	Other offenses committed by sentinels or others on guard in connection with such duty	....	1,117	....
	Offenses of violence:			
62	Threats to kill or injure	....	79	1
62	Assault with dangerous or deadly weapon	....	53	....
62	Assault with intent to do bodily harm	1	75	4
62	Assault with intent to kill	....	15	....
62	Assault, or assault and battery and other offenses of violence not against one in authority, or otherwise classified under this subhead	1	495	12
62	Manslaughter	....	3	....
	Offenses involving personal dishonesty:			
60	Embezzlement or misappropriation	1	8	....
60	Forgery	....	....	....
60	Larceny	....	124	2
60	Making or presenting false claims	4	....	....
60	Wrongful acquirement or disposition of Government property	....	47	....
62	Failure to pay debts	....	101	....
62	Failure to return borrowed property	....	9	....
62	Selling, pawning, or otherwise disposing of borrowed property	....	9	....
62	Forgery and uttering forged papers	5	31	....
62	Fraudulent financial transactions	5	64	....
62	Larceny	....	383	....
62	Embezzlement	....	1	....
62	Robbery	....	4	1
62	Burglary	....	9	1
62	Obtaining money under false pretenses	....	31	....
62	Other offenses under the sixty-second article of war involving personal dishonesty of the offender	1	341	....
	Unauthorized absences:			
31	Lying out of quarters	....	32	....
32	Absence without leave	....	15,679	....
33	Failure to attend roll call, etc	....	8,069	....
34	1 mile from camp without leave	....	2	....
47	Desertions	1	1,205	....
62	Absence without leave or from duty	2	2,556	....
	Offenses closely connected with military duty:			
62	Careless handling or discharge of firearms	....	205	....
62	False official statement or report	2	931	1
62	Impersonating superior officer or sentinel	....	2	....
62	Refusing to submit to surgical operation or medical treatment	....	36	....
62	Malingering	....	3	....
62	Sleeping while on duty	....	44	....
62	Other neglects of duty not classified under this subhead	19	3,086	15
	Offenses connected with intoxicating liquor:			
38	Drunkenness on duty	....	2,190	....
62	Drunkenness at post or in quarters	6	3,034	8
62	Drunkenness and disorderly conduct at post	....	1,954	4
62	Drunkenness and disorderly conduct causing offender's arrest and conviction by civil authorities	....	315	....
62	Having possession of, selling, or buying intoxicating liquor	....	170	2
62	Introducing liquor into camp, quarters, etc	....	667	2
62	Other offenses connected with intoxicating liquor and not otherwise classified under this subhead	8	2,264	21
	Offenses against decency:			
62	Committing nuisance	....	538	....
62	Indecent conduct and exposure	....	29	6
62	Sodomy and other unnatural practices	....	41	....
62	Rape	....	....	....
62	Other similar offenses	....	39	....
62	Conduct (not involving drunkenness) causing arrest and conviction by civil authorities	....	142	....
62	Loaning money at usurious rates of interest	....	6	....
62	Offenses not otherwise classified	8	1,560	3

Trials by summary courts.[1]

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Adams, Fort, R. I	508	241	48
Andrews, Fort, Mass	406	303	75
Apache, Fort, Ariz	154	57	37
Armstrong, Fort, Hawaii	84	3	3
Army and Navy General Hospital, Ark	66	41	62
Baker, Fort, Cal	326	182	55
Banks, Fort, Mass	235	130	56
Barrancas, Fort, Fla	517	127	25
Barry, Fort, Cal	188	76	40
Bayard, Fort, General Hospital, N. Mex	218	117	53
Benjamin Harrison, Fort, Ind	545	373	68
Bliss, Fort, Tex	616	761	123
Boise Barracks, Idaho	148	99	66
Brady, Fort, Mich	161	67	41
Casey, Fort, Wash	305	36	11
Caswell, Fort, N. C	298	159	52
Clark, Fort, Tex	366	160	43
Columbia, Fort, Wash	104	44	42
Columbus Barracks, Ohio	1,039	413	39
Constitution, Fort, N. H	130	78	60
Crockett, Fort, Tex	213	84	40
Crook, Fort, Nebr	349	188	53
Dade, Fort, Fla	201	87	43
D. A. Russell, Fort, Wyo	1,321	518	39
Davis, Fort, Alaska	139	106	76
De Russy, Fort, Hawaii	154	51	33
Des Moines, Fort, Iowa	458	322	70
Douglas, Fort, Utah	769	575	74
Du Pont, Fort, Del	475	157	33
E. S. Otis, Camp, Canal Zone	784	451	58
Ethan Allen, Fort, Vt	776	459	59
Flagler, Fort, Wash	289	130	44
George Wright, Fort, Wash	526	345	65
Gibbon, Fort, Alaska	291	63	21
Greble, Fort, R. I	297	157	53
Hamilton, Fort, N. Y	517	191	37
Hancock, Fort, N. J	597	307	52
Henry Barracks, P. R	140	57	41
H. G. Wright, Fort, N. Y., and Terry, Fort, N. Y	1,195	484	41
Howard, Fort, Md	417	218	52
Huachuca, Fort, Ariz	554	193	34
Hunt, Fort, Va	109	73	65
Jackson Barracks, La., and St. Philip, Fort, La	227	56	25
Jay, Fort, N. Y	380	245	64
Jefferson Barracks, Mo	1,050	306	21
Kamehameha, Fort, Hawaii	201	43	29
Key West Barracks, Fla	125	82	66
Lawton, Fort, Wash	354	216	61
Leavenworth, Fort, Kans	1,339	758	56
Lincoln, Fort, N. Dak	145	84	57
Liscum, Fort, Alaska	147	26	17
Logan, Fort, Colo	535	153	28
Logan H. Roots, Fort, Ark	279	265	94
McIntosh, Fort, Tex	220	195	88
McKinley, Fort, Me	679	310	46
McPherson, Fort, Ga	796	391	49
Mackenzie, Fort, Wyo	360	198	55
Madison Barracks, N. Y	567	385	68
Meade, Fort, S. Dak	474	320	67
Miley, Fort, Cal	167	106	63
Missoula, Fort, Mont	156	128	77
Monroe, Fort, Va	963	296	31
Morgan, Fort, Ala	324	139	43
Mott, Fort, N. J	207	61	29
Moultrie, Fort, S. C	433	198	46
Myer, Fort, Va	739	590	80
Niagara, Fort, N. Y	245	155	63
Oglethorpe, Fort, Ga	790	528	67
Omaha, Fort, Nebr	234	94	40
Ontario, Fort, N. Y	295	205	69
Plattsburg Barracks, N. Y	755	497	66
Porter, Fort, N. Y	250	114	46

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[1] This table does not include 3,039 cases tried at places where the statistics are not available for determining percentages.

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
Presidio of Monterey, Cal	981	370	37
Presidio of San Francisco, Cal	2,007	851	42
Presidio of San Francisco, Letterman General Hospital, Cal	156	150	96
Riley, Fort, Kans	1,093	588	53
Robinson, Fort, Nebr	583	327	56
Rock Island Arsenal, Ill	133	26	19
Rodman, Fort, Mass	125	73	59
Rosecrans, Fort, Cal	200	109	54
Ruger, Fort, Hawaii	222	190	85
St. Michael, Fort, Alaska	136	31	22
Sam Houston, Fort, Tex	1,047	626	59
San Juan, P. R	447	94	21
Schofield Barracks, Hawaii	2,813	1,181	42
Screven, Fort, Ga	433	138	32
Shafter, Fort, Hawaii	599	409	68
Sheridan, Fort, Ill	887	656	73
Sill, Fort, Okla	885	540	61
Snelling, Fort, Minn	791	553	69
Stevens, Fort, Oreg	292	188	64
Strong, Fort, Mass	376	235	63
Totten, Fort, N. Y	608	352	58
United States Army transports to San Francisco, Cal	...	49	...
United States military prison, Fort Leavenworth, Kans	181	206	113
Vancouver Barracks, Wash	1,431	702	49
Wadsworth, Fort, N. Y	226	105	46
Ward, Fort, Wash	124	91	75
Warren, Fort, Mass	200	99	50
Washington Barracks, D. C	503	207	51
Washington, Fort, Md	464	259	56
Wayne, Fort, Mich	361	149	41
William Henry Harrison, Fort, Mont	219	96	43
William H. Seward, Fort, Alaska	351	136	38
Williams, Fort, Me	523	286	55
Winfield Scott, Fort, Cal	1,012	478	46
Wood, Fort, N. Y	60	15	25
Worden, Fort, Wash	579	280	48
Yellowstone, Fort, Wyo	362	125	34
Camp at Sparta, Wis	2,706	145	5
PHILIPPINE ISLANDS.			
Augur Barracks	872	427	49
Camp Avery	507	74	14
Camp Bumpus	52	6	11
Camp Connell	228	27	11
Camp Downs	123	23	18
Camp Eldridge	440	237	53
Camp Gregg	1,203	127	10
Camp John Hay	214	137	64
Camp Keithley	529	369	69
Camp McGrath	732	425	58
Camp Overton	194	222	114
Camp Stotsenburg	1,259	798	63
Camp Ward Cheney	254	34	13
Cotabato	72	6	8
Davao	76	2	2
Fort Mills	1,447	171	11
Fort San Pedro	160	26	16
Fort William McKinley	2,929	1,824	62
Fort Wint	203	92	45
Isabela	45	8	17
Ludlow Barracks	465	246	52
Manila:			
Cuartel de Espana	809	253	31
Division hospital	139	58	41
Ordnance depot	51	4	7
Momungan	54	18	33
Pettit Barracks	289	211	73
Puerto Princesa	164	22	13
Regan Barracks	258	81	31
Tientsin	935	601	64
Torry Barracks	261	87	33
Warwick Barracks	99	27	27
Miscellaneous stations, camps, etc	450	122	21
United States Army transports to Manila	...	36	...

Trials by summary courts—Continued.

Posts.	Average of enlisted strength present on last day of each month.	Total number of trials by summary courts during year.	Percentage of trials by summary courts during year.
SECOND DIVISION.			
Headquarters Second Division	9	....	....
Headquarters and Companies E, G, and H, Second, and Company M, Third Battalion Engineers	514	78	15
Company D, Signal Corps; First Areo Squadron; detachment Company B, Signal Corps	172	31	18
Field Hospital No. 3	57	23	40
Ambulance Company No. 3	50	4	8
Sixth Cavalry	875	201	22
Fourth Field Artillery	756	193	26
Fourth Infantry	836	203	24
Seventh Infantry	889	203	22
Eleventh Infantry	796	112	14
Eighteenth Infantry	704	160	23
Nineteenth Infantry	909	214	23
Twenty-second Infantry	819	149	18
Twenty-third Infantry	920	106	11
Twenty-sixth Infantry	813	147	18
Twenty-seventh Infantry	827	240	29
Twenty-eighth Infantry	839	176	21
Field bakery No. 2	46	1	2
Pack trains Nos. 3, 6, 9	27	....	....
Eastern Department	20,233	10,395	51
Central Department	15,244	8,500	55
Western Department	16,230	6,886	42
Southern Department	3,624	1,080	30
Hawaiian Department	4,598	878	19
Philippine Department	15,513	6,801	43
Second Division	10,860	2,241	20

The total number of summary court trials during the year was 39,820. This is an increase of 2,408 as compared with last year. The number of trials by summary court this year was 46 per cent of the average enlisted strength of tho Army as against 45 per cent in 1912, 43 per cent in 1911, 57 per cent in 1910, 64 per cent in 1909, and 69 per cent in 1908. The fact that there has been a marked reduction in trials since 1908, and that the percentage has remained for three consecutive years under 50 per cent, indicates that the service is relying more upon the authorized company discipline.

DESERTION.

Statistics of trials for desertion for the four fiscal years preceding July 1, 1913, are set forth below:

	1910	1911	1912	1913
Tried for desertion	1,743	1,347	1,577	1,896
Tried for desertion, but convicted of absence without leave only and retained in the service	400	293	414	457
Tried for desertion, but convicted of absence without leave only and dishonorably discharged	130	101	117	169
Convicted of desertion and not dishonorably discharged	38	14	98	163
Convicted of desertion and dishonorably discharged	1,169	932	944	1,107

The above table does not specifically set out the number tried for desertion and acquitted, and it does not include cases of desertion where action other than trial by court-martial has been taken.

General Order No. 77, War Department, June 10, 1911, announced the policy of the War Department as to the proper punishment for the offense of desertion in cases of inexperienced soldiers who desert in the earlier periods of their enlistment contracts, and as well for the surrendered deserter. Disciplinary punishment by confinement and forfeiture was therein suggested as an appropriate punishment for such of these men as show a disposition to atone for their offenses and the cooperation of reviewing authorities was invited in carrying out the new policy.

The order was issued near the close of the fiscal year 1911 and so does not materially affect the statistics of that year. The execution which the order has received is very clearly revealed by comparing the number of soldiers convicted of desertion who were retained in the service for the two years preceding the issue of the order with the number so retained during the two years following the order. For the former years (1910 and 1911) these numbers were 38 and 14, respectively, the corresponding percentages to the total number of soldiers tried and convicted of desertion being 3 per cent and 2 per cent. For the latter years (1912 and 1913) the number of convicted deserters retained in the service rose to 98 and 163, respectively, the corresponding percentages being 10 and 13. While the percentage increase of men saved to the colors through the operation of this order has been most marked, the numbers actually restored continue small in comparison with the total number convicted of this offense and dishonorably discharged. Whether this percentage will increase for future years depends, of course, on the record of service of the deserters who have been retained.

GENERAL ORDER NO. 56, SEPTEMBER 17, 1913.

The complement of the statistics respecting convicted deserters retained in the service is found in the column of the foregoing table, "Convicted of desertion and dishonorably discharged." The number of these latter for the four fiscal years 1910, 1911, 1912, 1913 are, respectively, 1,169, 932, 944, and 1,107, the percentages for these years being, respectively, 97, 98, 90, and 87. These men, along with others convicted by court-martial of offenses other than desertion and dishonorably discharged (excepting felons) constitute our prison population, and it is with them that General Order No. 56, War Department, September 17, 1913, deals. The order recognizes two classes of prisoners confined in our military prisons: One, soldiers convicted of offenses against the discipline of the Army—purely military offenders—and the other, those convicted of acts of moral turpitude. It provides for the separation of these classes in their prison life, and that from the date of notice thereof soldiers convicted of offenses punishable by penitentiary confinement shall be sent to the penitentiaries, leaving for confinement in military prisons those convicted of purely military offenses or of such offenses in connection with misdemeanors. The further provisions of the order may be summarized as follows:

Those men convicted of purely military offenses alone, whose prison conduct places them in the first class, are made eligible for membership in companies and battalions to be organized and equipped as infantry under the command of officers to be detailed from the active list, with noncommissioned officers similarly detailed or specially enlisted for the service. Prisoners admitted to these companies are to undergo rigid military training and instruction during one half of each working day, and hard labor during the other half. The military training provided by the order is required to be intensely practical, the object being to make the men efficient soldiers from the date of rejoining the service, and includes target practice, instruction in hasty intrenchments, signalling, bayonet and saber drill, and extensive gynmasium training. Upon being enrolled in these organizations prisoners cease to be designated by number, and their prison garb is replaced by a uniform, differing materially, however, from the service uniform. It will result from these provisions that such prisoners as are restored to the colors will go back, not as men who have worn stripes or numbers—that is, as convicts who have done penal servitude—but as men who have been subjected to a special and rigid régime of military instruction and training, the purpose of which is to supply them with new standards of conduct and to enable them to render efficient service from the moment of rejoining. The new system will afford an opportunity to study more closely the question of the expediency and propriety of restoring to the colors men who have made one serious mistake. It is an essential part of the scheme that the conduct of the men so restored shall be carefully watched and reported upon after their return to the service. Final expression of opinion upon the question of the propriety of returning men of this class to the ranks should be deferred until experience has been had in the development of the scheme.

ACT OF AUGUST 22, 1912.

This act carried the provision that the provisions of section 1118, Revised Statutes, that no deserter from the military service of the United States shall be enlisted or mustered into the military service, and the provisions of section 2 of the act of Congress approved August 1, 1894, which provided that no soldier shall be again enlisted in the Army whose service during the last preceding term of enlistment has not been honest and faithful, shall not be construed to preclude the reenlistment or muster into the Army of any person who has deserted, or may hereafter desert, from the military service of the United States in time of peace, or of any soldier whose service during his last preceding enlistment has not been honest and faithful, whenever the reenlistment or muster into the military service of such person or soldier shall, in view of the good conduct of such person or soldier subsequent to such desertion or service, be authorized by the Secretary of War. Under the authority of this section this office has recommended for reenlistment 22 men convicted of the following offenses: Desertion, 16; disobedience of orders, 2; fraudulent enlistment, 2; trespass and assault, 2. In three cases favorable recommendation was withheld for the reason that the soldier had been found guilty of offenses involving moral turpitude, and in one case because the man's conduct in confinement had been bad. Of the 16 deserters whose reenlistment was recommended it appears that only 6 have thus far availed themselves of the authority granted, and of these 6 one has since deserted. The legislation under the terms of which these reenlistments have been authorized is in harmony with the organic prison act of March 3, 1873, section 6 of which (R. S., 1352) authorizes the Secretary of War to remit in part the sentences of convicts confined in the military prison and to give them "an honorable restoration to duty in case the same is merited."

The act of August 22, 1912, further provided for the remission of the loss of the rights of United States citizenship which had been attached by operation of law upon conviction of desertion, but remission was authorized only in cases of desertion committed in time of peace, in which clemency would not be prejudicial to the public interests. Three hundred and twenty-one applications for the remission of the loss of the rights of citizenship were received during the fiscal year, and favorable recommendation was made in 307 cases. Unfavorable recommendations were made in 14 cases—in 11 because the prisoners applying had been convicted of offenses involving moral turpitude in addition to the offense of desertion, and in the remaining 3 because of bad conduct of the prisoners while in confinement.

FRAUDS ON THE RECRUITING SERVICE.

A number of cases have occurred in the last few years where applications for enlistment have been made by men at recruiting stations for the purpose of obtaining subsistence and transportation to the recruiting depots, the applicant upon arrival at such depots declining to enlist. With a view to breaking up this practice, men have been prosecuted under section 5439 of the Revised Statutes (now sec. 36 of the criminal code of Mar. 4, 1909; 35 Stat., 1096). In a number of these cases the efforts resulted in the conviction of the offender. But during the last three years some courts have refused to convict on the ground that the penal clause of section 36 is indefinite and uncertain. A proposed bill to correct the defect has been presented to Congress and it is hoped it will soon become a law.

MILITARY LEGISLATION.

During the fiscal year ended June 30, 1913, this office examined and reported upon 90 legislative propositions. Much of the proposed legislation was modified from time to time and was referred to this office more than once, thus requiring two or more reports upon the same project or modification thereof. The number of original or supplementary reports rendered during the year was 145.

Of the projects of legislation prepared in this office the one of greatest importance, affecting directly the administration of military justice, is the revision of the Articles of War, which was introduced in both Houses of the Sixty-second Congress (2d sess.) by the chairmen of the Senate and House Military Committees. The House committee had several hearings to consider the project. No material objection to the proposed revision was developed at these hearings. Certain minor amendments were proposed, which could be accepted by the War Department. Notwithstanding the general favor with which the project was received by members of the House Military Committee participating in the hearing, and the recognition by them that revision was urgently needed, the bill, because of the urgency of the general legislative program, was not reported out of the committee and thus failed of consideration by the House. Similar reasons prevented the reporting of the bill by this committee during the third session of the Sixty-second Congress, but the Senate committee during that session reported nine articles of the proposed revision—those relating to the organization, composition, and jurisdiction of courts-martial. These were enacted as a part of the Army appropriation bill for the fiscal year ending June 30, 1914 (act Mar. 2, 1913), and went into effect July 1, 1913, with the exception of the article conferring more ample powers as to the convening of courts-martial, which was made effective from the date of the passage of the act. Shortly after the convening of the Sixty-third Congress the project, revised to incorporate the amendments proposed in the course of the hearings before the House Military Committee, was again introduced, this time by the chairman of the Senate Military Committee, and is now pending as S. 1032. The chairman has appointed a subcommittee to hold hearings and make a report upon the project, but it is understood that the urgency of the general legislative situation will require a postponement of hearings by the subcommittee until after the opening of the regular session, in December.

DELAYS IN GENERAL COURT-MARTIAL TRIALS.

The average period of delay between the arrest of a soldier under charges and his entry upon the execution of his sentence was made the subject of special comment in the last annual report. The statistics have been compiled again for the fiscal year of 1913, and a comparison between them and the statistics of 1912 is set forth below. (No statistics are available for prior years.)

1912.		1913.	
Eastern Division	48	Eastern Department	47
Central Division	48	Central Department	48
Western Division	44	Western Department	40
Philippine Division	25	Southern Department	44
		Hawaiian Department	36
		Philippine Department	38
		Second Division	28

The averages stated in the above table are higher than they should be. As far as investigation has proceeded the principal cause of delay is the taking of depositions. Statistics compiled in the Southern Department for a part of the fiscal year confirm this view. With a view to abridging this delay, the procedure as to taking depositions has been modified by Changes in the Manual for Courts-Martial, No. 2, April 21, 1913, so as to authorize depositions to be sent direct to a post commander where the witnesses whose depositions are sought reside at or near a post, thus avoiding the loss of time occasioned by sending these depositions through regular channels.

The statistics collected in this same department show further that the time consumed in preferring charges and making investigations is almost twice as great at large posts as at small ones. No reason is known why this should be the case. With the new procedure provided in the proposed revision of the Articles of War, I am satisfied that a further and substantial reduction of these average periods can be brought about.

E. H. Crowder,
Judge Advocate General.

The Secretary of War.

REPORT OF THE CHIEF OF THE QUARTERMASTER CORPS.

REPORT OF THE CHIEF OF THE QUARTERMASTER CORPS.

War Department,
Office Chief of the Quartermaster Corps,
Washington, October 15, 1913.

Sir: I have the honor to submit the annual report of the operations of the Quartermaster Corps for the fiscal year ending June 30, 1913.

QUARTERMASTER CORPS.

The provisions of section 3 of the Army appropriation act approved August 24, 1912, consolidating the office establishments of the Quartermaster General, the Commissary General, and the Paymaster General of the Army, and constituting a single bureau of the War Department, to be known as the "Quartermaster Corps," and the consolidation of the Quartermaster, Subsistence, and Pay Departments, to be known as the "Quartermaster Corps" of the Army, became effective on November 1, 1912, and the duties previously performed by the three separate departments were, from and after that date, discharged by the Quartermaster Corps, except such as pertained to the Philippine Department, where the consolidation became effective on January 1, 1913.

The consolidation was effected without delaying or interfering with the supply, service, and pay of the Army, notwithstanding the fact that approximately one-half of the 130 captains of the line detailed for duty with the Quartermaster Corps were relieved from such detail by the operation of law requiring two years' duty with troops in each preceding six years.

After eight months' operation of the Quartermaster Corps the records of this office show that a considerable saving has already been made in a majority of the appropriations disbursed for current requirements without any loss in efficiency, and that, although it is impracticable to submit a comparative statement of cost because of the short time under consideration, it is now apparent that the consolidation is a success, and that savings will even exceed the estimates previously made in hearings before the Military Committee of Congress.

PERSONNEL.

Commissioned.—The act of August 24, 1912, consolidated the Quartermaster, Subsistence, and Pay Departments and created the Quartermaster Corps of the Army, the commissioned strength being fixed at—

Major general	1
Brigadier generals	2
Colonels	12
Lieutenant colonels	18
Majors	48
Captains	102
Total	183

The authorized commissioned strength of the three separate departments when consolidated was as follows:

	Brigadiers general.	Colonels.	Lieutenants colonel.	Majors.	Captains.	Total.
Quartermaster	1	8	12	27	78	126
Subsistence	1	3	4	9	27	44
Pay	1	3	4	20	25	53
Total	3	14	20	56	130	223

A reduction of 2 colonels, 2 lieutenants colonel, 8 majors, and 28 captains is required by the act, which provides that no details to fill vacancies in these grades shall be made until the number of officers is reduced as above indicated.

On June 30, 1913, the number of captains had been reduced to 102 and the number of majors to 53.

One vacancy existed in the grade of lieutenant colonel, the number of colonels remained unchanged, and the total commissioned personnel was 204. It is expected that the 5 remaining surplus majors will have been absorbed by January, 1914. All of the 102 captains and 19 of the majors were detailed from the line for service in the Quartermaster Corps.

Attention is invited to the necessity of instruction for quartermasters which has been pointed out in former annual reports of the Quartermaster General. In 1907 the following recommendation was made:

> The present excellent courses of study at the Infantry and Cavalry School and Staff College at Fort Leavenworth undoubtedly offer a very valuable and fundamental training for officers for service in the Quartermaster's Department. The course in engineering in the Infantry and Cavalry School and the practical exercise in performing staff duties involving details of transportation of large bodies of troops obtained in the military art exercises in the Staff College furnishes a superior foundation of instruction for officers for service in this department. There is, however, an urgent need for officers specially trained in the construction of buildings; or water, sewer, and electric lighting systems; the installation of modern heating apparatus; in textiles and leather; and the process of manufacture of clothing, hats, shoes, etc.; also in details of transportation by land and water. In addition, there should be general instructions to the administrative work of the department, and the preparation of papers pertaining thereto, especially contracts and bonds. It is hoped that some practical scheme may be devised for the selection and instruction at the service schools at Fort Leavenworth of a limited number of specially qualified officers with a view to their detail to fill vacancies in the Quartermaster's Department.

In 1911 the following recommendation was made:

> *Instruction in quartermaster's duties for officers.*—This subject was mentioned in the annual report of the Quartermaster General for the years 1907, 1908, and 1909. It is of great importance and is therefore again brought to notice. To expect a second lieutenant, with two years' commissioned service, who by virtue of his appointment as squadron or battalion quartermaster becomes post quartermaster of a battalion post, to at first properly conduct the business is an optimistic dream which will rarely be realized. The lack of instruction in the details and ramifications of the Quartermaster's Department, previous to entering upon the duties of post quartermaster, in such cases, usually is met by the young officer being initiated into his work by the post quartermaster sergeant or civilian clerk and results in a correspondence school for his instruction being conducted by the office of the Quartermaster General and Chief Quartermaster of Division while he is being thus educated in his duties. In the meanwhile the interests of the Government, and those dependent upon him for proper supply, suffer.
>
> It is recommended that all lieutenants be required to take a prescribed course in the garrison school concerning quartermaster's duties, which subject is now covered, in a general way, under the head of "Administration," the regimental quartermaster or other experienced officer to be the instructor. The hope is again expressed that a plan may be devised for the selection and instruction, in the service schools, of a limited number of specially qualified officers with a view to their subsequent detail in the department.

An officer of the Quartermaster Corps should be equipped with a thorough knowledge of office administration and the functions of the Quartermaster Corps with reference to the organization of troops, their shelter and supply, in field and garrison; with their transportation by land and water; a thorough knowledge of animals, and the construction, lighting, heating, and ventilation of buildings, sanitary plumbing, and the construction of roads and bridges. This can only be accomplished by systematic study and it is thought that a course embracing such quartermaster work should be included in the garrison and service schools.

The duties being performed by officers of the Quartermaster Corps on June 30, 1913, are shown in Exhibit 1.

Enlisted.—The act of August 24, 1912, provides that "the noncommissioned officers now known as post quartermaster sergeants and post commissary sergeants, shall hereafter be known as 'quartermaster sergeants.'"

On July 1, 1912, the number of post quartermaster sergeants authorized was 200, and the number of post commissary sergeants authorized was 207. There are now in the service 404 quartermaster sergeants, Quartermaster Corps.

In the operation of section 3 of the act of August 24, 1912, 200 post quartermaster sergeants and 207 post commissary sergeants have become quartermaster sergeants in the Quartermaster Corps. The qualifications and methods of selection and appointment of post commissary sergeants and post quartermaster sergeants have heretofore been determined by the following statutory provisions, viz:

> The Secretary of War is authorized to select from the sergeants of the line of the Army who shall have faithfully served therein five years, three years of which in the grade of noncommissioned officers, as many commissary sergeants as the service may require, not to exceed one for each military post or place of deposit of subsistence supplies, whose duty it shall be to receive and preserve subsistence supplies at the posts, under the direction of the proper officers of the Subsistence Department, and under such regulations as shall be prescribed by the Secretary of War. * * * (Sec. 1142, Revised Statutes.)
>
> That the Secretary of War is authorized to appoint, on the recommendation of the Quartermaster General, as many post quartermaster sergeants, not to exceed 80, as he may deem necessary for the interests of the service, said sergeants to be selected

by examination from the most competent enlisted men of the Army who have served at least four years, and whose character and education shall fit them to take charge of public property and to act as clerks and assistants to post and other quartermasters. Said post quartermaster sergeants shall, so far as practicable, perform the duties of storekeepers and clerks, in lieu of civilian employees. * * * (Act of July 5, 1884; 23 Stat., 109.)

The act of August 24, 1912, does not specifically provide for the repeal of any portion of section 1142, Revised Statutes, or of the act of July 5, 1884; neither does the former act in terms prescribe the qualifications and methods of selection and appointment of quartermaster sergeants in the Quartermaster Corps.

Bulletin No. 1, War Department, dated January 20, 1913, promulgates the following opinion of the Judge Advocate General of the Army in this matter:

Section 1142, Revised Statutes, provides for the selection of commissary sergeants from among the sergeants of the line who have served faithfully therein for five years, three of which shall have been in the grade of noncommissioned officer. The act of July 5, 1884 (23 Stat., 109), provides for the appointment of post quartermaster sergeants upon the recommendation of the Quartermaster General, the same to be selected by examination from among the most competent enlisted men of the Army having at least four years' service, and whose character and education shall be such as to fit them to take charge of public property and to act as clerks and assistants to post and other quartermasters. Commissary sergeants were afterwards by law designated as post commissary sergeants and included in the Subsistence Department, and post-quartermaster sergeants were by law incorporated into the Quartermaster's Department. Section 3 of the Army appropriation act of August 24, 1912 (37 Stat., 591), consolidates the Quartermaster's, Subsistence, and Pay Departments of the Army into a single corps, to be known as the Quartermaster Corps, and changes the designations of post commissary sergeants and post quartermaster sergeants to quartermaster sergeants. It provides also that the duties now required by law to be performed by officers of said several departments shall hereafter be performed by such officers of the Quartermaster Corps as the Secretary of War may designate for that purpose. Held, that the consolidation of said departments into a single corps and the changing of the designation of said sergeants to that of quartermaster sergeant did not repeal the requirements regarding the appointment of said sergeants, respectively, and that in filling the position of quartermaster sergeant in the consolidated corps the requirements of both of said statutes with respect to the qualifications and methods of selection should be observed, adopting the higher qualifications and observing the more restricted field of selection when the two statutes contain different provisions upon the subject.

As the result of the consolidation and the application of both of the old statutes to determine the field from which new appointees to the position of quartermaster sergeant in the Quartermaster Corps may be selected is to render inelgible for appointment as quartermaster sergeants in the Quartermaster Corps all enlisted men below the grade of sergeant in the line of the Army and all grades of enlisted men who do not belong to the line of the Army, thus closing an avenue of advancement heretofore open to them, in so far as the 200 positions as post quartermaster sergeant were concerned.

It is thought that applicants for appointment as quartermaster sergeant, Quartermaster Corps, should be noncommissioned officers of the Army for three years and with at least five years' service in the Army, and selected from the most competent noncommissioned officers of the Army whose character and education should fit them to take charge of public property and act as assistants to the officer in charge of such property, which may be given legislative expression in substantially the following form:

That the Secretary of War is authorized to appoint such number of quartermaster sergeants, Quartermaster Corps, not to exceed the number provided for by law, as he may deem necessary for the interest of the service, said quartermaster sergeants to be selected from the most competent noncommissioned officers of the Army who shall have served therein at least five years, three years of such service having been rendered as noncommissioned officers, and whose character and education shall fit them to take charge of public property and to act as clerks and assistants to the proper officers of the Army in charge of public property.

Section 4 of the act approved August 24, 1912, provides:

> That as soon as practicable after the creation of a Quartermaster Corps in the Army not to exceed 4,000 civilian employees of that Corps, receiving a monthly compensation of not less than $30 nor more than $175 each, not including civil engineers, superintendents of construction, inspectors of clothing, clothing examiners, inspectors of supplies, inspectors of animals, chemists, veterinarians, freight and passenger rate clerks, civil-service employees and employees of the classified service, employees of the Army transport service and harbor boat service, and such other employees as may be required for technical work, shall be replaced permanently by not to exceed an equal number of enlisted men of said corps, and all enlisted men of the line of the Army detailed on extra duty in the Quartermaster Corps or as bakers or assistant bakers shall be replaced permanently by not to exceed 2,000 men of said corps; and for the purposes of this act the enlistment in the military service of not to exceed 6,000 men, who shall be attached permanently to the Quartermaster Corps, and who shall not be counted as a part of the enlisted force provided by law. * * * That enlisted force of the Quartermaster Corps shall consist of not to exceed 15 master electricians, 600 sergeants (first class), 1,000 sergeants, 650 corporals, 2,500 privates (first class), 1,190 privates, 45 cooks, all of whom shall receive the same pay and allowances of enlisted men of corresponding grades in the Signal Corps of the Army, and shall be assigned to such duties pertaining to the Quartermaster Corps as the Secretary of War may prescribe: *Provided further*, That the Secretary of War may fix the limits of age within which civilian employees who are actually employed by the Government when this act takes effect and who are to be replaced by enlisted men under the terms of this act may enlist in the Quartermaster Corps. * * *

Regulations were drafted and promulgated in General Orders, No. 40, War Department, October 25, 1912, to carry the foregoing section into effect. Circular No. 11, O. C. Q. M. C., dated November 19, 1912, prescribes the method of examination required for filling the several grades authorized by law.

On November 4, 1912, apportionments of enlisted men, Quartermaster Corps, were made to the various geographic departments and to independent posts and stations. Sufficient men of suitable grade were authorized to replace all unclassified civilian employees under 45 years, the age fixed by the Secretary of War, and to replace all enlisted men of the line on extra duty at a ratio of two Quartermaster Corps men for every three men on extra duty, as extra-duty men were so employed but a portion of the time.

The first examination for the higher grades was held under the immediate supervision of officers of the Quartermaster Corps, commencing the first Monday in March, 1913, at practically all posts within the territorial limits of the United States. Attached hereto, as Exhibit 2, is a statement showing the number of persons examined and the number of appointments made of those who attained an eligible rating in the educational and noneducational grades to include June 30, 1913.

On June 30, 1913, a total of 1,594 civilian employees in the United States and 2,045 enlisted men of the line on extra duty in the Quartermaster Corps had been replaced by 2,816 enlisted men of the Quartermaster Corps.

No classified civil-service employee nor unclassified civil-service employee at depots of the Quartermaster Corps in large cities has been removed for the purpose of filling the vacancy by an enlisted man of the Quartermaster Corps, and no unclassified civil-service employees over 45 years of age at posts have been removed for this purpose.

Attached hereto, as Exhibit 3, is a statement showing the number of men, by grades, apportioned to the different departments and other stations, including the Philippine department, and number of positions filled and unfilled as of June 30, 1913.

Pay clerks.—On August 24, 1912, the number of pay clerks in the service was 85.

The act of August 24, 1912, provides:

> * * * The Army paymaster's clerks shall be known as pay clerks.

and the act of March 2, 1913, making appropriations for the support of the Army for the fiscal year ending June 30, 1914, provides:

> * * * that hereafter no further appointments of pay clerks shall be made.

Between August 24, 1912, and June 30, 1913, 3 pay clerks died, 1 was retired, and 1 resigned, making a total of 5 vacancies, only one of which was filled, leaving a total of 81 pay clerks in the service on June 30, 1913.

Civilian employees.—There are distributed throughout the United States and its insular possessions approximately 8,500 civilian employees.

An actual saving of $47,030 per annum for clerical hire in the office of the Chief of the Quartermaster Corps has resulted from the consolidation of the office establishments of the Quartermaster General, the Commissary General, and the Paymaster General.

NATIONAL CEMETERIES.

There are 83 national cemeteries, classified as follows:

First class	26
Second class	21
Third class	13
Fourth class	23

Appropriated fiscal year 1913 for care and maintenance of national cemeteries	$120,000.00
Expended from appropriation "National cemeteries," fiscal year 1913	116,198.49
Leaving an unexpended balance of	3,801.51

Expenditures are made from appropriation "National cemeteries" for the care and maintenance of such cemeteries, pay of laborers and other employees, purchase of tools and materials, fuel for superintendents, and for the care of historic sites and improvement of soldiers' lots and plats owned by the United States in private cemeteries reserved for the interment of Federal soldiers.

The work done at the various national cemeteries during the fiscal year consists of keeping in proper care and condition the buildings, drives, walks, walls, fences, monuments, etc.

Superintendents.—

The appropriation for the pay of superintendents of national cemeteries, fiscal year 1913, was	$62,760.00
Amount expended	62,753.00
Leaving an unexpended balance of	7.00

There are 76 superintendents of national cemeteries authorized by law. Seven cemeteries were under charge of caretakers during the fiscal year. There have been four casualties during the year—three by death and one by dismissal. Four new appointments made.

Government approach roadway.—There are 19 Government approach roadways to national cemeteries maintained from the annual appropriation of $12,000 for this purpose; $10,843.25 was expended for resurfacing and repairing roads, leaving an unexpended balance of $1,156.70.

Post cemeteries.—Approximately $4,500 was expended in the repair and maintenance of post cemeteries during the fiscal year. Remains, Government headstones, and private monuments were removed from the cemetery at Fort Canby, Wash., to the post cemetery at Fort Stevens, Oreg., which has been designated as the place of interment for all posts in the artillery District of Columbia.

Headstones.—A contract was entered into for furnishing 20,000 regulation headstones, at $2.60 each, for the unmarked graves, the furnishing of the headstones for which was authorized under acts of March 3, 1873, February 3, 1879, and March 9, 1906, and for headstones of the unmarked graves of civilian employees interred in post cemeteries authorized in acts of April 28, 1904, and June 30, 1906. Twelve thousand, six hundred and seventy-five (12,675) headstones were shipped for this purpose during the fiscal year.

Disposition of remains.—

Appropriated fiscal year 1913	$57,500.00
Expended	49,457.02
Leaving an unexpended balance of	8,042.98

The following disposition was made of the remains of officers and enlisted men of the Army, active list, and of the remains of civil employees of the Army in the employ of the War Department, who died abroad or on Army transports:

Received at San Francisco, Cal., from abroad, including Alaska:			
Shipped home		63	
Delivered to relatives		12	
Interred in San Francisco, Cal., National Cemetery		63	
Awaiting disposition, July 1, 1913		3	
			141
Included in the above statement are the remains of 11 civilian employees, 20 civilians (not employees), and 13 remains handled for the Navy Department.			
Buried at sea (civilian employee)		1	
Received at Seattle, Wash., from Alaska and shipped home		8	
Received at New York from Panama, Canal Zone, and interred in Cypress Hills National Cemetery	1		
Interred in Ancon Cemetery, Panama	5		
		6	
			15
In the United States:			
Drowned, not recovered		2	
Shipped home		196	
Interred in post or national cemeteries		137	
			335
Total			491

Under this act, which also provides for the removal to national cemeteries at Government expense of the remains of Union soldiers, sailors, or marines interred in abandoned military posts or in fields or abandoned private and city cemeteries, 104 remains were disinterred and removed from the Fort Canby, Wash., cemetery and reinterred in the Fort Stevens, Oreg., cemetery; 12 remains removed from the post cemetery at Fort H. G. Wright, N. Y., to the Cypress Hills National Cemetery at Brooklyn, N. Y.; 1 remains from the farm of George Lynchach and reinterred in the Stone River, Tenn., National Cemetery; 176 remains removed from the abandoned military post of Fort Assinniboine, Mont., and reinterred in the Custer Battlefield, Mont., National Cemetery; also 37 remains from the abandoned military post of Fort Duchesne, Utah, reinterred in the National Cemetery at Santa Fe, N. Mex.

There being no appropriation under the control of this office which authorizes the burial of the remains of military prisoners who die at military posts while serving out sentence of general courts-martial, nor for the expenses of interment or shipment to their homes of the remains of civilian employees of the Army who die while on duty in the field or at military posts within the limits of the United States, it is recommended that Congress be asked to extend the provisions of the law under the item "Disposition of remains of officers, soldiers, civilian employees, etc.," to include these two classes.

Interment of indigent soldiers.—Twenty-five claims have been settled under the provisions of the act for expenses of burying in the Arlington National Cemetery or in the cemeteries of the District of Columbia, indigent ex-Union soldiers, ex-sailors, or ex-marines of the United States service, etc., who have been honorably discharged or retired and who die in the District of Columbia. The amount allowed in each case, exclusive of the cost of grave, is $45. Four claims of burial expenses under this law were rejected and nine claims are awaiting settlement. One-half of the expense incurred for this purpose is payable by the District of Columbia.

Revocable licenses.—Revocable licenses authorizing the use of portions of the Government approach roadways to the following national cemeteries have been issued by the Secretary of War:

Fayetteville, Ark., to the Kansas City & Memphis Railway Co., to cross road with its main line of railway track, August 24, 1912.

Fayetteville, Ark., to R. L. Vaughan, to lay a half-inch water pipe along a 4-inch sewer pipe across the road, October 9, 1912.

Newbern, N. C., to the Suburban Improvement Co., to lay and maintain a 5-foot concrete sidewalk on the north side of the road, a distance of approximately 1,200 feet, October 26, 1912.

Newbern, N. C., to the Suburban Improvement Co., to lay and maintain water and sewer mains in the road a distance of approximately 1,200 feet, February 18, 1913.

Richmond, Va., to city of Richmond, to extend Nicholson Street to connect with the Government roadway, October 31, 1912.

Springfield, Mo., to Phelps Grove Park Place Co., to build an entrance to the drive on its property, extending 3 feet east of the west line of the Government road, November 15, 1913.

Springfield, Mo., to the city of Springfield, to extend a 12-inch vitrified sewer pipe across the road at a point within the city limits, January 10, 1913.

Staunton, Va., to the Staunton Lighting Co., to erect and maintain electric-light poles along the north side of the road, August 21, 1912.

A revocable license was issued November 9, 1912, to the Louisville & Nashville Railroad Co., authorizing it to raise the grade of its double-track line through the Nashville (Tenn.) National Cemetery.

Miscellaneous.—The remains of one sailor, found in a section of the bow of the wreck of the battleship *Maine* in Habana Harbor in November, 1912, were removed to and interred in the *Maine* section, Arlington (Va.) National Cemetery, making the number now interred in that cemetery 230.

In pursuance of the act of March 9, 1906, the records of the commissioner for marking the graves of Confederate dead were in December, 1912, turned over to this office.

Under the provisions of the act of May 9, 1910, authorizing the Secretary of War to remove the mast of the wreck of the battleship *Maine* and place it on a proper foundation in Arlington National Cemetery, preliminary designs prepared by Mr. Nathan C. Wyeth, architect, for an elaborate memorial were accepted by the Commission of Fine Arts and approved by the Secretary of War, who authorized an allotment of $55,613 from the appropriation "Raising U. S. S. *Maine*, Habana Harbor, Cuba," for the erection of the memorial on a site slected for the purpose in the *Maine* section of the cemetery. The work is to be done under contract during the coming fiscal year.

By section 14 of the public buildings appropriation act approved March 4, 1913, it was provided that for the purpose of beginning the construction under the direction of a commission consisting of the Secretary of War, the Secretary of the Navy, and Superintendent of the United States Capitol Building and Grounds, Ivory G. Kimball, representing the Grand Army of the Republic, and Charles W. Newton, representing the United Spanish War Veterans, of a memorial amphitheater, including a chapel, at the National Cemetery at Arlington, Va., and in accordance with the plans of Cariere & Hastings, architects, New York City, adopted by the commission heretofor appointed, there was authorized the sum of $250,000, provided that the authorization shall not be construed as fixing the limit of cost of said building at the sum therein named, but the building therein provided for shall be constructed so as to cost, complete, including heating and ventilating apparatus and approaches, $750,000.

The said commission was also authorized to enter into contracts for the construction of said memorial amphitheater and chapel within the ultimate limit of cost above mentioned. Provided further, that the said commission, may, in its discretion, locate said chapel elsewhere upon the Arlington estate, and in that event may expend of the sum hereby authorized not more than $75,000 for the purpose of constructing said chapel.

A site for the amphitheater and chapel which has been approved by the commission of fine arts, has been selected and an estimate of $250,000 for the purpose of beginning the construction has been submitted to Congress by the Secretary of the Treasury in accordance with an opinion of the Attorney General rendered April 8, 1913, that the above-mentioned act does not authorize any present expenditure and that an estimate of the requirements should be submitted.

The sundry civil act approved August 24, 1912, authorized the interment in the Confederate section, Arlington National Cemetery, thereafter of persons dying in the District of Columbia who have served in the Confederate Armies during the Civil War, on the certificate of Camp 71, United Confederate Veterans of the District of Columbia, that such persons are entitled to burial under the authority so given, such interments to be made under the supervision and control of the Secretary of War. Since the passage of this act there have been three interments in the Confederate section at Arlington.

Under the authority of the same act, 31,250 square feet of land adjoining the Cave Hill National Cemetery, Louisville, Ky., were purchased from the Cave Hill Incorporated Cemetery Company at a cost of $25,000, the amount of the appropriation, in order to provide about 1,000 additional burial sites in that National Cemetery.

Under the provisions of the act of February 7, 1913, public No. 363, Sixty-second Congress, third session, the Confederate Cemetery at Little Rock, Ark., adjoining the Little Rock National Cemetery and comprising about 11 acres, was conveyed to the United States on June 9, 1913, by deed of gift from the Little Rock Memorial Chapter, No. 48, United Daughters of the Confederacy.

An appropriation of $1,000 was provided in the sundry civil act of August 24, 1912, for repairs and preservation of monuments, tablets, etc., constructed by the United States in Cuba and China, and has been expended mainly in the hire of a caretaker for the San Juan Battlefields in Cuba and the purchase of miscellaneous supplies.

The appropriation of $1,250 carried in this act for the care, protection, and maintenance of Confederate burial plats, owned by the United States at North Alton, Ill., Camp Chase, Columbus, Ohio, Greenlawn Cemetery, Indianapolis, Ind., Point Lookout, Md., and Rock Island, Ill., has been expended by this corps in repairs and improvements. These plats were acquired by the commissioner for marking the graves of Confederate dead, were properly graded, seeded, and inclosed with iron fences, and individual headstones or central monuments were erected prior to jurisdiction being transferred to this corps in 1912. The remains of 10,418 Confederate prisoners of war are buried in these plats.

ACCOUNTING.

Apportionments and accounting branch.—Consolidated financial statement, fiscal year ended June 30, 1913. (Exhibit 4.)

Detailed statement of expenditures of the Quartermaster Department and Quartermaster Corps for the fiscal year ended June 30, 1913, itemized under different appropriations. (Exhibit 5.)

Statement of account of the Philippine Islands. (Exhibit 6.)

Money accounts branch.—

Money accounts on hand July 1, 1912:	
Pay	30
Subsistence	104
Quartermaster	3
Total	137

Received during the fiscal year 1913	5, 340
Examined and sent to the Auditor for the War Department	5, 055
On hand at the close of the fiscal year	422
Certificates of deposit received	3, 703

Beneficiaries.—During the period from July 1, 1912 to June 30, 1913, payments were made under authority of the act of Congress approved May 11, 1908, as amended by an act approved March 3, 1909, to the beneficiaries of 25 officers, aggregating $40,178.72, and of 273 enlisted men, aggregating $79,651.80, making a total disbursement of $119,830.52.

Mileage.—For mileage disbursements for the fiscal year ending June 30, 1913, see Exhibit 7.

Property accounts.—After being in operation for a year and a half, the system of post property accounts provided for in Circular No. 18, Q. M. G. O., 1911, and amendments thereto, appears to be accomplishing the purpose for which it was inaugurated. The number of returns, vouchers, etc., handled by the property branch of this office during the fiscal year are as follows:

Returns of quartermaster property:	
On hand July 1, 1912	140
Received during the fiscal year	52
Examined during the fiscal year	192
Militia returns received and examined	47
Returns of subsistence property for period to Nov. 1, 1912, date of consoldidation with quartermaster property:	
On hand July 1, 1912	6
Received during the fiscal year	486
Examined during the fiscal year	492
Militia returns for calendar year 1912 received and examined	47
Vouchers to post property accounts:	
On hand July 1, 1912	8, 479
Received during the fiscal year	239, 469
Posted to the property account	239, 546
On hand June 30, 1913, to be posted	8, 402
Returns of subsistence stores:	
On hand June 30, 1912	158
Received during the fiscal year	2, 160
Examined during the fiscal year	2, 219
On hand June 30, 1913	99

Contract branch.—There have been examined and corrected when necessary, approved, indexed, and entered on record of contracts:

Proposal and acceptance agreements	3, 721
Supplemental agreements	273
Contracts	3, 024
Contracts with bonds	1, 571
Notices of increase, decrease, and termination	1, 175

Deposits and allotments branch.—Allotments of enlisted men: During the period July 1, 1912, to June 30, 1913, there was disbursed $702,321.44 in payment of allotments made by enlisted men of the Army. The total number of allotments in force on June 30, 1913, was 5,137.

Soldiers' deposits.—From July 1, 1912, to June 30, 1913, 66,548 deposits were received, amounting to $1,057,238.22. Deposits repaid were 37,356, amounting to: Principal, $1,349,928.59; interest, $75,698.98.

Claims branch.—At the beginning of the fiscal year there were on hand awaiting action:

4 miscellaneous claims, amounting to	$144.46
8 accounts, amounting to	259.27
There were received during the year:	
482 claims, amounting to	26,448.27
445 accounts, amounting to	14,677.57
Total claims on hand and received 939, amounting to	41,529.57

Action has been taken upon these claims and accounts as follows:

75 claims have been approved for payment of	$2,281.76
362 claims have been transmitted to the Treasury or other Departments for settlement amounting to	11,785.14
Reduction on claims allowed and referred	60.65
47 claims were disallowed amounting to	12,359.18
363 accounts have been approved for payment of	11,711.97
68 accounts have been transmitted to the Treasury Department for settlement amounting to	2,546.09
Reduction on accounts allowed and referred	120.91
2 accounts have been disallowed amounting to	116.40
Final action has been taken on 484 claims and 433 accounts amounting to	40,982.10

There remained on hand awaiting action at the close of the fiscal year:

2 miscellaneous claims amounting to	$106.00
20 accounts amounting to	441.47
Total 22 claims and accounts amounting to	547.47

Confederate horse claims.—The following is a statement of the claims for horses and baggage taken from paroled Confederate soldiers in violation of the terms of surrender of the Confederate Army at Appomattox, presented under the act of Congress approved February 27, 1902:

On hand at the beginning of the fiscal year awaiting action		455
Final action was taken during the fiscal year as follows:		
Claims approved and authorized paid	16	
Claims disallowed	9	
Total finally acted upon		25
On hand at the close of the fiscal year ending June 30, 1913, awaiting action		430

For the payment of these claims Congress has appropriated the following sums: By act of February 27, 1902, $50,000; by act of March 3, 1903, $50,000; by act of April 27, 1904, $125,000; by act of March 3, 1905, $100,000; and by act of March 4, 1907, $40,000; a total of $365,000.

Of this sum there has been expended in payment of claims approved by the Secretary of War $358,135.95, $2,195 of which was expended in the past fiscal year for payment of 16 claims. There remained at the close of the fiscal year to the credit of the appropriation the sum of $6,864.05.

The time limit for filing this class of claims expired on June 25, 1912.

Damage claims.—In the act of Congress making appropriation for support of the Army for the fiscal year 1913, approved August 24, 1912, the sum of $32,616 was appropriated for the settlement of claims for damages to and loss of private property by citizens of the United States, Hawaii, and the Philippine Islands.

There were at the time the estimate was prepared for submission to Congress 220 of this class of claims which had been presented, investigated, and the aggregate amount found to be due the claimants $30,443.58. While action upon the appropriation bill was pending in Congress and before it became a law additional claims were received in this office to the number of 19, amounting to $2,490.09. The 220 claims, amounting to $30,443.58, and 18 others on file in the office, amounting to $2,172.31, total 238 claims, amounting to $32,615.89, were transmitted to the Auditor for the War Department for payment from the appropriation made by Congress, leaving a balance of 11 cents of the sum appropriated.

In the act making appropriation for support of the Army for the fiscal year 1914, approved March 2, 1913, Congress made provision for the payment of 21 additional claims for damages which had been investigated and forwarded to this office by appropriating the sum of $1,652.43. These claims were also transmitted to the Auditor for the War Department for settlement, making a total number of damage claims settled during the fiscal year of 259, amounting in the aggregate to $34,608.32.

At the close of the fiscal year there were on file in the office 16 damage claims, amounting to $2,566.66, which had been investigated, and no provision had been made for their payment.

Claims pertaining to act of July 4, 1864.—There were transmitted to the Court of Claims during the year or to the Department of Justice the papers in 20 claims which had received unfavorable action of the Chief of the Quartermaster Corps and had been appealed to the Court of Claims for reexamination and action in that court.

Newspapers and periodicals.—Newspapers and periodicals were supplied for the use of the enlisted men of the Army at posts and stations in the United States, Hawaii, Alaska, and Porto Rico and at the main recruiting stations in the United States, at a total cost of $6,470.46.

The cost of newspapers and periodicals supplied for use of the enlisted men serving in the Philippines during the year is reported as $763.99.

SUPPLIES.

All supplies necessary for the maintenance and upkeep of the Army, such as rations and other subsistence stores, ranges, cooking and heating stoves, baking and cooking appliances, typewriters, stationery, office furniture, tableware and kitchen utensils, and equipment for troops, have been promptly and efficiently furnished.

Supply of troops in the field at Galveston and Texas City, Tex., and along the Mexican border.—The troops of the Second Division in camp at Texas City and Galveston, Tex., have been satisfactorily supplied with stores and services under a plan of supply for field service worked out by this office and approved by the Secretary of War under date of March 13, 1912.

This system provides for the supply of troops direct from base depot at Galveston upon requisitions submitted by the troops to the depot through the division authorities. The Galveston base depot is in turn supplied direct from the depot of the Quartermaster Corps at St. Louis, Mo., upon copies of invoices covering transfers to troops. Under the plan above referred to accountability of subsistence stores and expendable articles of quartermaster stores terminates with their transfer from the Galveston depot to the troops in the division. Nonexpendable articles are issued to organizations on memorandum receipt. This relieves the quartermasters with troops from detailed paper work in connection with property accountability, leaving with them the matter of responsibility only, the depot quartermaster at Galveston, the base, being the accountable officer for all such property.

The same system of supply prevails in connection with troops along the border of Texas, New Mexico, and Arizona, with El Paso as the point of supply.

This plan of supply has proven efficient in that all troops at the point named are generally amply and expeditiously supplied with the stores necessary for their equipment and comfort in the field and with the minimum of paper work on their part.

Temporary shelters for all animals, bathing facilities for the troops, and kitchen shelters for companies, etc., at Texas City and Galveston, Tex., and temporary shelters for animals at the several camps along the Mexican border have been provided from materials on hand at depots and with small expenditures from the appropriations "Barracks and quarters" and "Water and sewers."

The main source of supply of troops of the Second Division and troops along the border has been the general depot at St. Louis, Mo. Articles not on hand at St. Louis or readily procurable there have been obtained at the New York, Philadelphia, and Jeffersonville depots. Subsistence stores have generally been procured locally, but evaporated milk was obtained from St. Louis, bacon and canned meats from Chicago, and fresh beef from Houston and Fort Worth. The fresh beef supplied to troops at Galveston and Texas City has been of a satisfactory quality. The total quantity inspected was approximately 800,000 pounds. There was rejected because of diseased cattle, old cattle, and failure to come up to specifications as to weight, conditions, etc., 87,966 pounds. Issues of fresh beef are made direct from refrigerator cars to organizations. There were heavy losses on fresh vegetables, due to long storage on transports and climatic conditions.

Troops at Galveston and Texas City are furnished with fresh bread daily from the field bakeries at these points. The quality of bread is excellent and supply ample at all times.

Relief of flood and cyclone sufferers.—The Quartermaster Corps was called upon to furnish supplies and services for the relief of sufferers from the floods of the Mississippi and Ohio Valleys in the spring and summer of 1913.

The amounts expended for this purpose are as follows:

Clothing and equipage	$216,748.97
Regular supplies	23,643.05
Incidental expenses	2,444.56
Army transportation	177,055.94
Subsistence of the Army	229,625.16
Water and sewers	443.85
Mileage	4,486.96
Total	654,448.49

Celebration of the fiftieth anniversary of the Battle of Gettysburg.—This celebration lasted from June 29 to July 4, inclusive, 1913. The camp was laid out and installed and the necessary subsistence, equipment, field ovens, field ranges, tentage, cots, blankets, etc., were furnished by the Quartermaster Corps under authority contained in the act of Congress approved August 26, 1912.

Forage.—There was expended during the fiscal year for forage of animals pertaining to the Army, $3,784,609.17. This includes the forage used in the Philippine Islands, Alaska, Hawaiian Islands, and Porto Rico, except native grass and bedding purchased in the Philippine Islands. In addition to the foregoing there was purchased 86,200 pounds of dog food at a cost of $6,256.26.

Fuel.—During the fiscal year 1913 fuel for all purposes except for transports and harbor boats cost $2,059,428. Attached hereto and marked "Exhibit 8" is statement showing quantities and cost of fuel, except for transports and other vessels, purchased during the fiscal year 1913, not including purchases in the Philippines.

Forage and bedding furnished in the Philippines, and fuel and quantities of forage purchased for shipment to the Philippines, are shown in Exhibits 9 and 10.

Mineral oil.—Purchases of mineral oil for lighting purposes, except for the Philippine Islands, were made at an aggregate cost of $51,143.20.

Issues to the militia.—Miscellaneous supplies to the value of $123,712.97 (except subsistence supplies) were issued to the Organized Militia during the fiscal year under the authority of statutes providing for such issue.

No gratuitous issues of such supplies were made to the Organized Militia of the District of Columbia.

Telephones.—During the fiscal year 1913, $32,129.34 was expended for rental of telephones.

CLOTHING AND EQUIPAGE.

Appropriation by Congress for the purchase and manufacture of clothing and equipage for the fiscal year ended June 30, 1912	$5,000,000.00
Credits on account of issues of clothing and equipage to the Militia of the States, Territories, and the District of Columbia during the fiscal year 1912–13, for which the appropriation has been or will hereafter be reimbursed	1,150,751.06
Deposits from all other sources, consisting of sales of all kinds, but not including issues to the States and Territories and the District of Columbia, nor collections from enlisted men at time of discharge from the service on account of clothing drawn in excess of established allowances	165,445.12

Collections and disbursements in connection with the settlement of the clothing accounts of the enlisted men of the Army.—The following statement shows the collections from and disbursements to the enlisted men of the Army in the settlement of their clothing accounts, viz:

Collection on account of clothing drawn in excess of established allowances:	
Appropriation 1912—	
From Apr. 11, 1912, to June 30, 1912	$6,462.95
From July 1, 1912, to Mar. 31, 1913	94,541.22
Appropriation 1913—	
From July 1, 1912, to Mar. 31, 1913	63,852.80
Total collections	164,856.97

Payments to enlisted men at time of discharge from service, on account of clothing undrawn:

Appropriation 1912—	
From Apr. 1, 1912, to June 30, 1912	$165,876.93
From July 1, 1912, to Mar. 31, 1913	11,469.95
Appropriation 1913—	
From July 1, 1912, to Mar. 31, 1913	696,246.33
Total expenditures	873,593.21

Issues to the militia.—The following is a detailed statement showing the value of clothing and equipage supplies ordered to be issued to the Militia of the States and Territory of Hawaii and of the District of Columbia during the fiscal year ended June 30, 1913, upon requisitions approved by direction of the Secretary of War. In order to facilitate the supply of the articles called for, issues were made from the supplies procured for the Army and the appropriation for clothing and equipage has been or will hereafter be reimbursed:

States and Territory.	Act of May 27, 1908.	Act of June 22, 1906, amending sec. 1661, R. S.	Total.
Alabama	$492.43	$35.88	$528.31
Arizona	1,346.10		1,346.10
Arkansas	2,201.22	367.24	2,568.46
California	32,807.40	415.83	33,223.23
Colorado	11,621.53	900.45	12,521,98
Connecticut	23,618.10	7,528.71	31,146.81
Delaware	4,184.75	44.65	4,229.40
District of Columbia	10,749.33	2,076.77	12,826.10
Florida	11,748.25	474.92	12,223.17
Georgia	33,107.39	506.77	33,614.16
Hawaii	5,763.95	2,188.67	7,952.62
Idaho	4,408.00	19.10	4,427.10
Illinois	65,921.45	255.40	66,176.85
Indiana	9,172.52		9,172.52
Iowa	2,724.85	953.88	3,678.73
Kansas	14,641.06	135.28	14,776.34
Kentucky	13,296.39	8.82	13,305.21
Louisiana	15,021.74	8.76	15,030.50
Maine	13,281.77	5,454.08	18,735.85
Maryland	17,258.27	15,972.23	33,230.50
Massachusetts	21,097.50	114.59	21,212.09
Michigan	31,142.87	7,400.60	38,543.47
Minnesota	21,989.40	1,531.40	23,520.80
Mississippi	17,628.98	154.63	17,783.61
Missouri	38,766.44	147.53	38,913.97
Montana	5,722.94		5,722.94
Nebraska	24,820.50	187.75	25,008.25
New Hampshire	6,895.59	1,938.18	8,833.77
New Jersey	43,777.39	9,093.71	52,871.10
New Mexico	4,399.03		4,399.03
New York	139,715.07	13,094.57	152,809.64
North Carolina	23,058.28		23,058.28
North Dakota	7,324.54	1,246.33	8,570.87
Ohio	63,858.03	235.77	64,093.80
Oklahoma	$111.32	$369.08	$480.40
Oregon	14,010.85	35.88	14,046.73
Pennsylvania	83,854.04		83,854.04
Rhode Island	13,710.81	1,526.35	15,237.16
South Carolina	21,194.83	5,832.90	27,027.73
South Dakota	7,667.70	3,175.22	10,842.92
Tennessee	14,499.93	3,989.71	18,489.64
Texas	30,931.39	2,613.62	33,545.01
Utah	6,527.94	408.14	6,936.08
Vermont	7,115.98	2,897.00	10,012.98
Virginia	24,034.58	2,097.10	26,131.68
Washington	13,546.40	1,923.59	15,469.99
West Virginia	10,632.17	22,501.98	33,134.15
Wisconsin	31,769.77	2,985.89	34,755.66
Wyoming	5,423.10	1,258.22	6,681.32
Total	1,026,643.87	124,107.19	1,150,751.06

Sales to the militia.—There were sold to governors of the following States, including the Territory of Hawaii and to the commanding general, District of Columbia, for the use of the militia, under the provisions of section 17 of the act of Congress approved January 21, 1903, clothing and equipage supplies to the value of $24,694.96, which amount has been placed to the credit of the appropriation for clothing and equipage, viz:

Arizona	$14.71	Montana	$270.59
California	1,484.32	Nebraska	15.36
Connecticut	943.69	New Mexico	.45
District of Columbia	156.73	New York	808.38
Florida	27.79	North Dakota	977.56
Georgia	770.50	Ohio	550.30
Hawaii	33.98	Oregon	93.44
Illinois	590.64	Pennsylavania	2,401.83
Indiana	58.81	Rhode Island	370.82
Iowa	762.79	Tennessee	22.35
Kansas	143.52	Texas	18.83
Kentucky	.45	Utah	92.21
Louisiana	19.30	Vermont	3,969.81
Maine	708.67	Virginia	412.11
Maryland	376.40	Washington	931.70
Massachusetts	1,975.90	West Virginia	3,465.66
Michigan	97.15	Wisconsin	809.71
Minnesota	789.29		
Mississippi	477.74	Total	24,694.96
Missouri	51.47		

Sales of clothing and equipage to various departments and bureaus of the Government.—There were sold during the fiscal year ending June 30, 1913, to various departments and bureaus of the Government, under special authority of the Secretary of War, in accordance with the provisions of paragraph 682, Army Regulations, 1910, as amended, clothing and equipage supplies to the value of $44,103.91, which amount has also been placed to the credit of the appropriation for clothing and equipage as follows:

Department of Agriculture	$404.88
Department of Commerce and Labor	360.45
Engineer Department	3,208.64
United States Geological Survey	1,634.02
Department of the Interior	1,035.06
Isthmian Canal Commission	$597.02
Bureau of Insular Affairs	316.75
Department of Justice	66.98
United States Marine Corps	246.28
Navy Department	29,494.04
Ordnance Department	34.08
United States Soldiers' Home	5,256.45
Supply Division, War Department	15.80
Smithsonian Institution	18.64
Treasury Department	1,359.00
Superintendent State, War and Navy Department Building	55.82
Total	44,103.91

Sales at auction.—There was realized during the fiscal year ended June 30, 1913, at the several purchasing and manufacturing depots of the Quartermaster Corps from sales of condemned articles of clothing and equipage and cuttings, etc., the sum of $34,452.57.

The expense in making these sales was $256.40, leaving a balance of $34,196.17, which, as required by law, was covered into the Treasury of the United States, and credited to miscellaneous receipts.

Status of clothing and equipage supplies, including purchases. manufactures, and issues to the Army and the militia.—The accompanying consolidated statement shows in detail the quantities of clothing, equipage and materials purchased, manufactured, and issued to the Army and the militia during the fiscal year ended June 30, 1913, and the quantities remaining on hand on said date, exclusive of the quantities in Field Supply Depot No. 1. (Exhibit 11.)

Clothing and equipage purchased and manufactured for exclusive issue to troops stationed in Alaska.—The following is a statement showing the articles of clothing and equipage purchased or manufactured during the fiscal year ended June 30, 1913, for issue to troops stationed in Alaska, and cost of same, amounting to $42,137.87, viz:

Articles.	Quantity.	Unit price.	Total.
At San Francisco:			
Boots, rubber, Alaskan	1,296	$3.18	$4,121.38
Drawers, wool, knit	2,000	1.80	3,600.00
Gloves, Scotch wool ....pairs	1,377	.71	977.67
Gloves, horsehide ....do	78	1.28	99.84
Gauntlets, canvas ....do	624	.98	611.52
Insoles, felt ....do	1,388	.23	319.24
Mittens, duck ....do	1,414	.45	636.30
Mittens, horsehide ....do	1,021	1.12	1,143.52
Mittens, Siwash ....do	1,021	2.79	2,848.59
Parkas, duck	351	3.00	1,053.00
Jackets, pea	636	5.75	3,657.00
Socks, rope ....pairs	390	.40	156.00
Stockings, German ....do	1,283	.97	1,244.51
Pacs, shoe ....do	1,377	3.63	4,998.51
Slickers, Alaskan	806	1.73	1,394.38
Sweaters, Alaskan	156	3.60	561.60
Toques	1,827	.38	694.26
Trousers, duck	1,377	2.75	3,786.75
Undershirts	2,041	1.80	3,673.80
Parkas, reindeer	27	55.50	1,498.50
Mittens, Alaskan fur ....pairs	41	4.00	164.00
Covers, tent sled	20	14.50	290.00
At Fort Davis, Alaska:			
Boots, water mucklucks ....pairs	390	4.35	1,696.50
Boots, winter mucklucks ....do	390	4.30	1,677.00
By department quartermaster, Western Department:			
Tents, mosquito	12	22.50	270.00
At Omaha, Nebr.:			
Buffalo robes, marking	241	4.00	964.00
Total			42,137.87

Buffalo overcoats.—Three thousand five hundred and seventy-three buffalo overcoats remained on hand July 1, 1913. These coats were stored at the Omaha depot of the Quartermaster Corps. There were sold during the last fiscal year under authority of the Secretary of War 462 coats. The sum of $13,666.05 was realized, an average of $29.58 each.

Amount credited on the clothing money accounts of enlisted men during the fiscal year ended June 30, 1913, on account of purchase of blankets.—Woolen blankets in the hands of enlisted men on July 1, 1913, and which were issued to them prior to said date and charged upon their clothing money accounts, became the property of the United States and for each and every serviceable blanket turned over, not exceeding two, a credit of $2.68 was given on the clothing account of the soldier from whom the blankets were purchased. Blankets which in the opinion of company commanders were unfit for further service have been submitted to the action of surveying officers with a view to determining the advisability of purchase.

The records of this office show that from July 1, 1912, to March 31, 1913, the sum of $26,453.84 was placed to the credit of enlisted men on account of the purchase of these blankets in the manner indicated.

Renovation of olive drab overcoats.—As stated in the last annual report of the clothing supply branch, the issue of overcoats to company and detachment commanders for use of the enlisted men of their respective commands was carried into effect. The coats thus issued remain the property of the United States and will be turned in by the men upon their discharge from the military service. The coats thus turned in are being accumulated at posts and then transferred to the Philadelphia depot for cleaning and renovation.

Report is made that there were turned into the depot named during the last fiscal year 1,342 overcoats, which were cleaned at a cost of $916.94; 91 were found unfit for repair. The remainder were repaired at a cost of 80 cents each.

Changes in specifications for clothing and equipage.—With a view to having the several articles of equipage enumerated below conform to standard commercial types, specifications for these particular articles have been so modified as to provide for purchase upon samples to be submitted by bidders with proposals: Axes, ax helves, rubber boots, corn brooms, scrubbing brushes, fly and suspender buttons, black Italian cloth, corset jeans, drilling, white cotton gloves, hatchets, hatchet helves, black and canvas padding, pickaxes, pickax helves, long and short handled shovels, spades, stovepipe, and suspenders.

Olive drab woolen materials.—It is of interest to comment upon the beneficial results which have obtained from the change from olive drab worsted to woolen materials used in the manufacture of overcoats and woolen service coats and breeches.

The reasons for making the change are fully set forth in the annual report of the Quartermaster General for the fiscal year ended June 30, 1911. The average prices last paid for worsted materials were as follows:

22-ounce	per yard	$2.04
16-ounce	do	1.57½
13-ounce	do	1.30¾

The prices paid during the last fiscal year for woolen materials, with greater competition than heretofore, were:

22½-ounce	per yard	$1.69
16½-ounce	do	1.37
13½-ounce	do	1.314

Issue of clothing, old style.—Paragraph IV, General Orders, No. 129, War Department, September 21, 1911, requires that when changes or modifications are made in articles of clothing or equipage issues to the Army and the Organized Militia of the kind and pattern on hand be continued until exhausted.

The provisions of this order were complied with until the stock of the old-style articles referred to had become exhausted to such an extent as to make it no longer practicable to make further issues.

Shoes.—The new style of russet shoes recommended by the board of officers convened under the provisions of paragraph 7, Special Orders, No. 57, 1911, from the headquarters, Central Division, referred to in the last annual report of the Quartermaster General, having been approved by the Secretary of War, specifications for same eliminating the black dress and russet garrison shoes heretofore issued to the enlisted men of the Army, thereby providing for only one style of shoes, were adopted on August 15, 1912, and standard samples conforming thereto were procured and furnished the general purchasing depots of the Quartermaster Corps. With a view to increasing competition specifications were revised so as to conform more closely to commercial trade conditions. In revising these specifications this office was materially assisted in the revision by the Bureau of Chemistry of the Department of Agriculture and several of the large shoe manufacturers.

Shoe lasts.—In order that the corps may be prepared to furnish hereafter to contractors the necessary lasts required in the manufacture of shoes, 30,000 pairs have been purchased to date and an advertisement for 5,000 additional pairs is now pending.

Stockings.—The question of changing the mode of manufacturing the light weight woolen stockings by having the yarns made entirely of either wool or cotton, instead of blending the two materials into one yarn, as in the present standard, was brought to the attention of this office by the depot quartermaster at Philadelphia.

Inasmuch as the stockings as issued have proven to be very satisfactory this office did not consider it advisable to make the proposed change. The method proposed, it was believed, would not be of any particular advantage considering serviceability, comfort, or shrinkage in laundering.

Service hats.—Numerous complaints having reached this office that the service hats were uncomfortable on account of the stiffness of the brim and consequently they did not conform to the contour of the head, the Chief of Staff directed that this fault be corrected, which has been accomplished by the elimination of the process known as wine-stiffening and substituting the commercial process of water-stiffening. The standard and specifications have therefore been changed. Manufacturers are now permitted to use raw materials either domestic or foreign.

Materials for shelter tents, slickers, and ponchos.—After numerous tests this office has not yet succeeded in obtaining a satisfactory material for shelter tents, slickers, and ponchos to conform with the recommendation of the Cavalry and Equipment Board.

Riding gloves.—The Uniform Regulations of 1912 (par. 74–a) provide that mounted troups shall be supplied with riding gloves, when prescribed. In order to prepare to meet requisitions the Chief of Staff directed that suitable samples be procured. Several manufacturers were called upon to submit samples from which the Chief of Staff selected a horsehide glove, dyed olive drab and conforming closely in shade to the service uniform.

Improvements in tents.—In order to further standardize the tents used in the Army as far as practicable, it was decided to discontinue the manufacture of wall tents for officers and adopt in lieu thereof a pyramidal tent, of the same construction as those adopted for the

Statement showing the yearly and per diem cost of subsistence per man in the United States and Philippines.

	Number of rations.	Daily average number of men.	Net cost.	[illegible]
Cost in the United States	24,[illegible]	[illegible]197	$7,416,481 [illegible]	[illegible]
Cost in the Philippines	7,[illegible]	19,354	2,064,[illegible]	[illegible]

The above gives expenditures made in the United States [illegible] ippines, respectively, from the appropriation [illegible] Army, 1913," and includes cost of rations issued [illegible] rations of all kinds, ice, meals, clerical hire, [illegible] of transport service, net losses of stores and property [illegible] indicates the actual cost per man per day in the [illegible] Philippine Islands, as far as subsistence is concerned.

Losses.

DEBITS.

Ordinary wastage and losses in issue and transportation	$[illegible] 44
Deterioration of stores from climatic causes, etc	[illegible] 14
Theft	[illegible] 20
Property expended and worn out in the Government service	[illegible] 02
Total debits	91,916.30

CREDITS.

Reclamations made from carriers and contractors	1,943.73
Receipts from sales at auction of deteriorated supplies	8,129.60
Gains on stores (account issues)	13,299.36
Gains on property	692.65
Total credits	24,055.34
Total debits	91,916.30
Total credits	24,055.34
Net losses	67,861.16

The net loss of $67,861.16 is 0.8838 of 1 per cent of the total disbursements, amounting to $7,677,948.25.

The losses above referred to occurred in geographical divisions as follows:

United States	$[illegible]
Philippine Islands	[illegible]
Alaska	[illegible]
Transports	[illegible]
Hawaii	[illegible]
Porto Rico	[illegible]
Total	[illegible]

Changes in Army ration.—Under Executive order of January 31, 1913, "lard compound" was added as a substitutive article for lard in the garrison ration in order to reduce the cost of same. Later it was found that the term "lard compound" did not quite cover the

SUMMATION.

Total debits	$597, 673. 78
Total credits	193, 166. 10
Net cost	404, 507. 68

Statement of issues made during the fiscal year 1913.

Garrison, travel, haversack, and trail rations (29,767,537), average cost, 23.41387 cents	$6, 969, 732. 54
Filipino rations (2,188,848), average cost, 17.11074 cents	374, 528. 11
Emergency rations (9,856)	3, 379. 91
Articles other than ration articles issued	122, 567. 18
Ice issued	67, 880. 05
Recruit kits issued	32, 671. 60
Housewives issued	687. 94
Gratuitous issues to destitutes, etc	3, 010. 01
Reimbursement issued	1, 944. 04
Issued to Indian prisoners of war	10, 595. 37
Total value of issues	7, 586, 996. 75

Number, value, and average cost of rations, by geographical divisions, etc., issued during the fiscal year 1913.

Division.	Number of rations.	Value.	Average cost (cents).
United States (includes Canal Zone)	22, 675, 086	$5, 230, 135. 44	23. 07
Alaska	400, 949	140, 213. 88	34. 97
Hawaii	1, 583, 733	389, 096. 65	24. 56
Porto Rico	230, 179	63, 878. 15	27. 75
Transports	226, 923	61, 976. 52	27. 31
Philippines (American)	4, 650, 667	1, 084, 432. 00	23. 31
Total average cost (American)	29, 767, 537	6, 969, 732. 54	23. 41
Philippines (native)	2, 188, 848	374, 528. 11	17. 11
Canal Zone	281, 742	87, 890. 11	31. 19

Statement showing average cost of the ration with and without transportation.—The average cost of the actual food included in the garrison (American) ration during the fiscal year was as follows:

	Cents.
At all posts or stations in the United States	23. 3962
At all posts or stations in the Philippines and on transports	23. 5036
At all posts or stations in the United States, Philippines, and on transports	23. 4138

The cost of transportation charged on subsistence supplies was $262,956.27. This includes the cost of transportation for the ration articles, sales articles, and property. Charging this amount to the total cost of the garrison ration issued, it gives for the past fiscal year an increased cost for each ration of 0.8834 cent, thus making the cost of the garrison ration, delivered, including food, and transportation, as follows:

	Cents.
At all posts or stations in the United States	24. 2796
At all posts or stations in the Philippine Islands and on transports	24. 3870
At all posts or stations in the United States, Philippine Islands, and on transports	24. 2972

Statement showing the yearly and per diem cost of subsistence per man in the United States and Philippines.

	Number of rations.	Daily average number of men.	Net cost.	Average cost per year.	Average cost per diem (cents).
Cost in the United States	24,892,078	68.197	$7,416,461.62	108.75	29.79
Cost in the Philippines	7,064,307	19.354	2,094,801.41	108.23	29.65

The above gives expenditures made in the United States and Philippines, respectively, from the appropriation "Subsistence of the Army, 1913," and includes cost of rations issued, commutation of rations of all kinds, ice, meals, clerical hire, extra-duty pay, net cost of transport service, net losses of stores and property; in other words, indicates the actual cost per man per day in the United States and Philippine Islands, as far as subsistence is concerned:

Losses.

DEBITS.

Ordinary wastage and losses in issue and transportation	$16,874.44
Deterioration of stores from climatic causes, etc	37,902.74
Theft	7.30
Property expended and worn out in the Government service	37,132.02
Total debits	91,916.50

CREDITS.

Reclamations made from carriers and contractors	1,943.73
Receipts from sales at auction of deteriorated supplies	8,129.60
Gains on stores (account issues)	13,289.36
Gains on property	692.65
Total credits	24,055.34
Total debits	91,916.50
Total credits	24,055.34
Net losses	67,861.16

The net loss of $67,861.16 is 0.8838 of 1 per cent of the total disbursements, amounting to $7,677,948.25.

The losses above referred to occurred in geographical divisions as follows:

United States	$49,352.24
Philippine Islands	35,616.29
Alaska	3,295.25
Transports	1,679.01
Hawaii	1,484.63
Porto Rico	489.08
Total	91,916.50

Changes in Army ration.—Under Executive order of January 21, 1913, "lard compound" was added as a substitutive article for lard in the garrison ration in order to reduce the cost of same. Later it was found that the term "lard compound" did not quite cover the article which it was desired to procure, and that the general trade term for the article desired was "lard substitute." In consequence this office made a recommendation setting forth the reasons for the change and requesting that same be made, which was approved and formally authorized by Executive order dated July 15, 1913. Lard and lard substitute are now required to be used in proportion of 50 per cent each, in computing the value of the ration.

In the case of the butter component a recommendation was approved providing that computation should be made on a basis of 50 per cent butter and 50 per cent oleomargarine. This change was also made in order to reduce the cost of the ration, for the reason that if the computation was made upon the item of a high-priced article like butter only, it would add very materially to the cost of the ration.

Training schools for bakers and cooks.—Recommendation was made for the establishment at Fort Sam Houston of a training school for bakers and cooks, in order that the Southern Department should be provided with a school similar to those now in operation in the Eastern Department, at Washington Barracks; in the Central Department, at Fort Riley; and in the Western Department, at the Presidio of San Francisco. Such a school would insure a trained personnel that would be available for field service in an emergency, and enable the students to receive instructions in handling a bakery under field conditions.

The establishment of such a school would call for available space at Fort Sam Houston for school of about 30 men, which would require a laboratory, study, and recitation rooms. It should be located as near to the bakery as possible, for with the establishment of the school it is contemplated that the management of the bakery should be under the direction of the officer in charge of the school, this being the most desirable means of imparting instruction in baking to the students.

The number of students graduated during the year at the bakers and cooks' school at Washington Barracks, D. C., was 29 enlisted men as bakers, 43 as cooks, and 10 as mess stewards; at Fort Riley, Kans., 40 enlisted men as bakers, and 192 as cooks; at the Presidio of San Francisco, Cal., 82 enlisted men as bakers, 71 as cooks, and 12 as mess stewards. The number of officers who graduated during the year at Fort Riley were 5 officers in the bakers' course and 7 in the cooking course.

Militia attending training schools for bakers and cooks.—Officers and enlisted men of the militia are authorized to avail themselves of the opportunity of attending service schools, including the training schools for bakers and cooks. It does not appear from the records of this office that the officers and enlisted men of the Organized Militia have generally availed themselves of the opportunity for taking the prescribed course in the schools for bakers and cooks, only one or two officers and probably not exceeding four men having asked for detail to this very important course. From this fact it is inferred that the availability of this course of study to the militia is not generally known to the members of that organization. It is thought that if the attention of adjutants general of the States could be directed to this matter, through the office of the Chief of Division of Militia Affairs, many officers and enlisted men would be glad to avail themselves of the instruction offered to perfect themselves in the trade of baking and cooking. The importance of this instruction would be invaluable to militia organizations in time of war, for the trained men could be used as a nucleus for a training school for the volunteer and militia organizations. In this connection it may be stated that if the Organized Militia were called into service in time of war they could place probably five or six divisions in the field. As field bakeries have been regularly adopted for use in field service at the rate of one for each division, it will be seen that there should be officers and enlisted men of the militia thoroughly instructed in installing and operating these bakeries under field conditions. The necessary training for operating field bakeries could be given in connection with the course of instruction in the school for bakers and cooks, the handling of the field bakery being a part of the regular course in all the schools. In time of war bakers and cooks of the regular forces would be required with their own organizations and could not be depended upon to operate bakeries for militia divisions, who in this respect would have to depend entirely on their own efforts in supplying themselves with field bread. It is urged that every effort be made to induce these officers and men to take these courses of instruction which are open to them at all of the three schools.

Use of agricultural laboratories.—All depot quartermasters in the United States purchasing subsistence stores for the Army were notified on February 7, 1913, that they should avail themselves, whenever possible, of the invitation extended by the Chief of the Bureau of Chemistry, Agricultural Department, to make use of the facilities of the laboratories of that bureau in the various cities of the United States, for the purpose of testing food products with the view of ascertaining whether or not those purchased were wholesome and pure. The privilege of making use of these laboratories by purchasing officers of the Army was freely offered by the Agricultural Department, and a judicious use of this privilege will enable quartermasters purchasing food supplies for the Army to always secure the best class of stores.

Alamo attachment.—The Alamo attachment for field range No. 1 has been adopted and instructions given to have all these ranges equipped with the Alamo attachment, thus adding about 50 per cent to the boiling capacity and about the same per cent to the life of the range. It adds very little to the weight in bulk of the oven when packed. The Alamo attachment was the invention of Capt. O. J. Charles, Seventeenth Infantry, United States Army.

Statement showing the number and cost of miscellaneous supplies purchased is appended, marked as Exhibit 12.

CONSTRUCTION AND REPAIR.

Appropriations and expenditures.—A tabulated statement attached hereto as Exhibit 13 shows the appropriations and amounts available during the past fiscal year for the construction, repair, and rental of buildings, including plumbing, heating, lighting, and equipment, purchase and rental of land, construction and repair of water, sewer, lighting, and power systems, wharves, roads, walks, bridges, and other improvements on military reservations; also the approximate amounts apportioned from the several appropriations, the general purposes for which apportioned, and the unapportioned balances at the close of the fiscal year.

Construction of buildings.—The buildings constructed or contracted for from funds of the past fiscal year, the cost of the various items of work, and the appropriations to which the cost has been charged, not including work in the Philippine Islands, are set forth in the general construction statement forming part of this report, attached hereto as Exhibit 14.

The posts where the more important items of construction work were authorized are as follows:

Fort Bliss, Tex.: Hospital ward wing, isolation hospital, and temporary shelter for Cavalry troops.

Front Royal Remount Depot, Va.: Freight storehouse, colt stable, veterinary dip, colt sheds, etc.

Fort Huachuca, Ariz.: Barracks for two troops of Cavalry, four double sets of officers' quarters, addition to commissary storehouse, and addition to hospital.

Letterman General Hospital, San Francisco, Cal.: Disinfecting building, addition to detention ward, nurses' dormitory, and hydrotherapeutic ward.

Schofield Barracks, Hawaii: Continuing the constructions of barracks, stables, officers' quarters, etc., for Cavalry post and officers' quarters for Infantry post; also construction of laundry building and permanent water and sewer systems.

Fort Shafter, Hawaii: Continuing the construction of hospital wards, from funds of the preceding fiscal year.

Walter Reed General Hospital, District of Columbia: Additional ward.

In the planning of barracks by this office during the past fiscal year plastering has been generally omitted in the interests of sanitation as well as economy. The use of hollow tile blocks in the construction of buildings has been found satisfactory. These blocks have been used at the Front Royal Remount Depot, and it is contemplated to use them in some of the proposed buildings at Fort Bliss, Tex., for which plans are now being drawn.

Shooting galleries and ranges.—The total amount appropriated under this head in the Army act for the fiscal year 1913 was $93,336, of which amount $3,450 was made immediately available for the purchase of additional land adjoining the military reservation of Fort D. A. Russell, Wyo.

The apportionments made from this amount are classified as follows:

Purchase of land at Fort D. A. Russell, Wyo	$3,200.00
Construction and permanent improvements on target ranges	34,609.01
Rent of ranges	2,483.28
Repair of ranges	29,384.62
General purposes in Philippine Islands	20,608.18
Unallotted balance	3,050.90
Total	93,336.00

The more important items of construction and improvements were $15,079.78 for construction of range at Fort Crook, $7,600 for reinforced concrete butts at Fort Bliss, $1,462.90 for two target houses at Fort Leavenworth, $4,603.38 for grading and filling in arroyo at Whipple Barracks, and $2,261.82 for improvements on ranges in the Hawaiian Islands.

Wharves and retaining walls.—Under these heads, the total amounts apportioned from the appropriation "Roads, walks, wharves, and drainage, 1913," were as follows:

Construction, including additions to wharves and boathouses	$28,247.55
Repairs and improvements	68,656.25
Total	96,903.80

The items of construction work were as follows:

Fort Armstrong, Hawaii, retaining wall	$3,000.00
Fort Caswell, N. C., addition to boathouse	2,885.00
Fort Flagler, Wash., addition to wharf	1,772.00
Fort Liscum, Alaska, timber wharf	3,693.55
Fort McRee, Fla., reconstruction and repair of wharf	4,743.00
Peo Pico, Cal., timber wharf, landing float, and board walk	8,940.00
Fort Taylor, Fla., boathouse	1,442.00
Fort Worden, Wash., addition to wharf	1,772.00
Total	28,247.55

Dredging channels.—The amounts apportioned for this class of work from the appropriation for "Roads, walks, wharves, and drainage, 1913," are enumerated below. The dredging at Forts Caswell and Mott was turned over to the Engineer Corps of the Army for execution, the cost of the work to be reimbursed from funds of the Quartermaster Corps. The amount stated for Fort Hancock is to cover one half the cost of dredging at the quartermaster wharf at that post. The work is being done by the Ordnance Department, from whose funds the other half of the cost will be defrayed:

Fort Caswell, N. C	$4,772.35
Fort Mott, N. J	15,000.00
Fort Preble, Me	1,668.00
Fort Hunt, Va	8,400.00
Fort Hancock, N. J	4,820.00
Total	34,660.35

Roads and walks.—The total amounts apportioned for roads and walks from the appropriation for "Roads, walks, wharves, and drainage, 1913," were as follows:

Construction of roads	$203,523.55
Repair of roads	81,769.43
Construction of walks	20,245.63
Repair of walks	23,147.12
Total	328,685.73

During the year extensive road and walk work was undertaken at the various posts. Some of the more important projects were:

Fort Crockett, Tex	$8,010.30
Fort Sill, Okla	30,701.78
Presidio of San Francisco	13,900.00
Fort Stevens, Oreg	9,620.40
Fort Myer, Va	15,980.00
Fort Slocum, N. Y	4,629.40
Fort Leavenworth, Kans	5,000.00
Fort Casey, Wash	4,512.00

Congress having specifically set aside from the appropriation "Roads, walks, wharves, and drainage, 1913," the sum of $44,000 for the construction of a road from the south end of the new Highway

Bridge across the Potomac River to the Arlington National Cemetery Va., including the purchase of not to exceed 4 acres of land, for the necessary right of way, and $22,000 from the same appropriation for macadamizing the road upon the Government property between the United States governmental farm and the Arlington National Cemetery, this office immediately took the proper steps to have this construction carried out. On account of more filling on the right of way being necessary than originally contemplated, and the high cost of the land, it was found that to have accepted the lowest bids for the work would have exceeded the amount of the appropriation. It was therefore found necessary to reduce the width of the paved portion of both roads. It is estimated that to complete the roads to the width originally contemplated will require $11,000 additional. An estimate for this amount has been inserted in the 1913 general deficiency bill for the purpose.

There was also authorized specifically by Congress the sum of $3,600 for completing the macadamizing of the road between the city of Vancouver and the military post at Vancouver Barracks, Wash. This project was put under contract during the year at a cost of $3,568.

In order to reduce the cost of crushed rock for use in repairing roads at the various military posts in the vicinity of San Francisco, Cal., the old rock-crushing plant at Angel Island, Cal., was remodeled so as to operate electrically, at a cost of $14,211.85.

Railroads on military reservations.—In furtherance of the policy of the department to own all railroads on military reservations and to allow common carriers to connect thereto at the boundaries of the reservations and to facilitate the handling of supplies, and the entraining and detraining of troops at Fort D. A. Russell, Wyo., the sum of $46,100 was authorized during the year for the construction of railroad sidings, switches, etc. This amount will not complete the system, however, as a few additional spurs are necessary. The additional work is now being advertised with a view to its authorization from funds of the fiscal year 1914.

At Fort Leavenworth, Kans., to continue the work on the railroad terminal system at that post, the sum of $6,863 was authorized.

An appropriation of $50,000 was made by Congress for the construction of a railroad around the reservation at Fort Mason, Cal., to connect with the belt line operated by the State of California; but this money was not used, as Congress later granted authority to the Panama-Pacific Exposition Co. to construct the road in question.

Railroad equipment.—Cars, locomotives, etc., are procured from the appropriation "Transportation of the Army and its supplies." The only expenditures for this purpose made during the year was for the purchase of new car wheels for use at Fort Hancock, N. J., at a cost of $151.

Grading and drainage.—The total amounts apportioned under this head, including funds apportioned for special filling projects at Fort Taylor, Fla., and West Point, N. Y., as stated below, were as follows:

Drainage and grading projects	$107,762.69
Drainage repairs	9,163.60
Total	116,926.29

To remove breeding places for mosquitoes, an expenditure of $1,797.55 was authorized for ditching and draining, etc., on what is known as "Marshall reservation," Fort Moultrie, S. C.

For grading ground around the hospital at Fort H. G. Wright, N. Y., $2,400 was authorized.

The sum of $8,085 was expended for grading the parade ground at Fort Winfield Scott, Cal., and $3,208.50 for grading near drill hall, Fort Leavenworth, Kans. For placing top soil around the double barracks at Fort Hancock, N. J., there was authorized the sum of $1,620.

The sums of $50,000 and $30,000 having been specially set aside under the appropriation "Roads, walks, wharves, and drainage, 1913," for filling low lands at Fort Taylor, Fla., and for filling ponds and swamps on Constitution Island, West Point, N. Y., this office proceeded to have the work contracted for, the first project at a cost of $49,600 and the latter $29,000.

Water and sewer projects.—The total amount apportioned from the appropriation for "Water and sewers, 1913," for the construction and extension of water and sewer systems, including water-distributing systems, filtration plants, and sewage-disposal plants in the United States, was approximately $257,499.07. There was also expended at Schofield Barracks, Hawaii, from the special appropriation for "Water system, Schofield Barracks, Hawaii," the sum of $112,200, making a total of $369,699.07 for water and sewer projects.

Water-supply systems.—At many of the posts it has been found necessary in recent years to increase the water supply, (1) on account of enlarging the garrisons, (2) on account of the installation of modern plumbing and the more liberal use of water for sprinkling and irrigating purposes, and (3) on account of the failure of the sources from which they were formerly supplied.

The sum of $112,200 was authorized from the special appropriation above referred to for Schofield Barracks, Hawaii, which was commenced in 1912. The whole system cost about $166,000.

Two new wells were drilled and a third deepened at Fort Bliss, Tex., at a cost of $14,600. A steel tank and trestle at Fort Niagara, N. Y., was authorized, at a cost of $9,175. New pump house, pipe line, etc., at Fort Sill, Okla., cost $20,300. A new water-supply system for the Front Royal Remount Depot, Va., was authorized, at a cost of $19,250.

Filtration plant.—At Fort Porter, N. Y., where the water supply is obtained from Lake Erie, it has become necessary to purify the water, and there was constructed during the year at this post a filtration plant, at a cost of $12,447.

At Fort Caswell, N. C., the water supply was improved by the construction of a distilling plant, installation of new boilers, etc., at a cost of $41,890.

Water-distributing systems.—The more important projects of this nature that were accomplished during the fiscal year are as follows:

Schofield Barracks, Hawaii	$19,000
Fort Lawton, Wash	1,700
Fort Winfield Scott, Cal	3,049

Sewer systems.—A new sewer system was constructed at Schofield Barracks, Hawaii, at a cost of $16,000, and extensions were made to the post systems at Jackson Barracks, La., $3,100; at Fort Huachuca, Ariz., $3,443; and at Fort Douglas, Utah, $5,600.

Sewage disposal.—At the Front Royal Remount Depot, Va., there were constructed a sewer system and sewage-disposal plant at a cost of $9,300.

Fire apparatus.—The following new apparatus and hose were purchased either on account of new construction or to increase the present equipment at a post or depot: One gasoline fire engine; 4 chemical fire engines; 603 chemical fire extinguishers; 11,853 feet of hose; 382 axes; 39 ladders; 2 hook and ladder trucks; 1,279 buckets, and 6 reels, at a cost of $18,554.92.

Electric lighting systems and power plants.—Some effort has been made during the fiscal year to reduce the cost of operation of the Government plants at the various posts throughout the service. With this object in view, some time ago, Form No. 109, which was revised during the past year, was inaugurated. This form gives in a concise manner a report upon the operations of the various plants, and if the data are carefully compiled and reported upon, such report will furnish valuable data to this office upon the operation of such plants. A careful inspection of the latest reports made on Form No. 109 indicates considerable inefficiency upon the part of the personnel operating such plants, and clearly indicates that a great amount of good work could yet be done in a direction which would result in annual savings of thousands of dollars. With a view to reducing the cost of operations of the plants and establishing them upon a uniform and, as near as practicable, commercial basis, this office has laid out a general scheme for having an engineer go to those plants which show a poor economy in operation, during slack periods in this office; this with a view to properly organizing and instructing the personnel relative to their work.

It is noted that a considerable improvement has already resulted due to the placing on duty at such plants of engineers, electricians, and firemen of the Quartermaster Corps. This personnel promises to be efficient and capable, and it is thought that by keeping a high standard of examination, within a short period the Quartermaster Corps will possess a corps of specialists well qualified and equal to any found in commercial practice.

In the operation of post lighting systems, and particularly that part relating to the exterior lighting, it is noted that 4,000 hours per year burning is authorized. Commercial practice provides in most communities and cities what is known as a moonlight schedule, which provides that lamps for exterior lighting should burn approximately 2,200 hours per annum instead of 4,000 hours, as had formerly been the practice in the service. With a view to reducing the cost of providing lighting at the posts, instructions were given to the department quartermasters to have included in all annual contracts for lighting a moonlight schedule wherever practicable; also to require such schedule to be put into effect at Army posts where current is furnished from post plants. There has been prepared a blueprint schedule showing in part the saving which will be made by the use of the moonlight schedule for exterior lighting. This schedule is incomplete for the reason that a number of contracts for the purchase of current have not been received. Where electric current is paid for by meter rates the saving has been estimated on the basis of a decrease of 40 per cent in the amount of current used, but where current is paid for on a flat rate per lamp this office can not estimate the saving which will be made until the contracts showing the new rates are all received.

However, considering the contracts for the fiscal year 1914 which have been received in the office, and assuming that a relative saving will be made at posts where current is furnished from post plants, it is estimated that the saving will be $19,078. It is thought, however, when all contracts have been received a total annual saving of $25,000 will be made.

The total amount expended from the appropriation "Regular supplies, 1913," for the construction and extension of electric lighting systems and power plants was approximately $44,642.88.

The more important items of work were as follows:

Fort Liscum, Alaska, material and labor for electric lighting system	$7,500
Fort Mason Supply Depot, installation of electric lighting system	15,700
Letterman General Hospital, installation of two 75-kilowatt turbine sets	8,370

The sum of $12,466.78 was also expended during the fiscal year from the special appropriation for "Military prison, San Francisco, Cal.," in street lighting and wiring buildings of new prison at Alcatraz Island.

Personnel operating power plants.—During the fiscal year arrangements were made with the office of the Chief of Coast Artillery whereby the following coordination of the personnel at Coast Artillery posts would be carried out:

War Department, O. C. S., C. A. D.,
October 26, 1912.

The Secretary of War:

After consideration of the second and third indorsements, it is recommended that the following general policy, incorporating the ideas of the Chief of Engineers, the Chief of the Quartermaster Corps, and the Chief of Coast Artillery on this subject, be approved by the Secretary of War:

1. To provide all batteries requiring power for fortification purposes, or in certain cases groups of batteries, and, in general, all searchlights, with suitable local direct-connected direct current generating sets, preferably gasoline or oil engine driven; these local plants to be so interconnected and provided with suitable reserve sets as to insure continuity and flexibility in service.

2. In general, in time of peace to purchase the power for the post lighting system and for other similar post purposes when it is in the interests of economy to do so; in such cases the habitual use of the two systems to be separate and distinct, but provision to be made for a "breakdown" service connection by means of which the fortifications can use the power of the post in emergency, or vice versa; wiring for this connection to be underground.

3. In case it is impracticable advantageously to purchase power for the post service and the fortification system is insufficient for that purpose, to install a central plant such plant to constitute a reserve for fortification purposes, the location and character of the plant to be decided upon by the Chief of Engineers, the Chief of Coast Artillery, and the Chief of the Quartermaster Corps.

4. To employ direct current for the post service systems in all cases except where transmission conditions are such as to render the use of direct current decidedly uneconomical.

5. In case power for post purposes is purchased, a sufficient reserve plant to be installed by the Quartermaster Department, if the fortification system does not provide such a reserve, to provide for the actual necessities of the post in time of hostilities in case of interruption to the supply of commercial power.

6. In general, to provide for interchangeability between the post and fortification power systems. In case alternating current is used for post purposes, the reserve plants contemplated in the preceding paragraph should consist of suitable alternating-current generators, and provision should be made by the installation of suitable converters or motor generators for the conversion of alternating into direct current, and vice versa, the installation of the converting apparatus to be made by the

department charged with the installation of the sytem to be served by the converted power.

7. In general, to insure coordination and to prevent a division of responsibility in case of emergency, all power plants to be operated under the supervision of the Coast Artillery authorities, employing, whenever practicable, Coast Artillery enlisted personnel for that purpose."

The results that may be expected from the following out of this policy may be briefly summarized in the statement that such policy will prevent a duplication of personnel.

Relative to so much of the policy relating to converting apparatus at Coast Artillery posts, this office has under consideration a plan to install without delay at all places wherever practicable suitable converting apparatus in order that power may be converted from quartermaster plants for use of fortifications, or vice versa from fortification plants for post purposes. Such a policy will not only result in economy so far as personnel is concerned, but also in the fuel and other operating expenses of the plants concerned, all costs of which are chargeable to the appropriation of the Quartermaster Corps.

Incandescent lamps.—The following amounts were expended for incandescent lamps during the fiscal years 1911, 1912, and 1913:

Fiscal year 1911	$48,323.84
Fiscal year 1912	55,105.24
Fiscal year 1913	7,941.63

It will be noted that comparatively few incandescent lamps were purchased during the last fiscal year. This is accounted for by the fact that an investigation of the number of lamps on hand at posts indicated that at many posts an accumulation of lamps had occurred. In order to utilize the stock on hand a redistribution of the lamps was made, which was thought to be advisable in view of the fact that most of the lamps on hand were of an older type and less efficient than the lamp at present on the market, and also with a view to reducing as much as possible the tendency on the part of post authorities to be extravagant in the use of such lamps. To avoid such accumulation in the future, a new form to be submitted with the annual estimates for repairs, known as the annual estimate for incandescent lamps, was prepared and furnished all posts. Estimates for the fiscal year 1914 have been received and clearly indicate the great necessity for a report of this kind. In a number of instances the fact has been disclosed that lamps of improper voltage have been furnished the post, and in many cases the use of lamps has been excessive. The furnishing of lamps of improper voltage, and especially at voltages less than those required, has undoubtedly resulted in an excessive consumption of lamps. Steps have also been taken to furnish posts where the cost of electric current is high with a modern and most efficient tungsten lamp, it being contemplated to utilize the present stock of old-type lamps at posts where the cost of current is low.

New forms.—During the fiscal year practically all of the forms known as quarterly reports on water systems, lighting systems, sewer systems, etc., have been revised with a view to reducing to a minimum the clerical labor necessary on the part of post authorities in the preparation of such forms, and also with a view to furnishing this office with available data. To accomplish this a new form known as "Data sheets" has been made up and furnished to the posts for the recording of all permanent data or that which does not change frequently. It is contemplated that these data sheets are to be carefully made out and submitted at once and no further reports on the permanent data being reported until a material alteration or a change in the installation is made. A reduction of practically 50 per cent in the number of forms was made by consolidating the current data and also all permanent data. It is contemplated that the data sheets will form a part of the historical records, which have proved of great value for reference in this office.

Oil-burning apparatus.—The installation of the latest type of oil-burning apparatus has been continued at the following posts during the fiscal year: Fort Baker, Cal., Fort Winfield Scott, Cal., Fort Rosecrans, Cal., Fort Mason, Cal., Presidio of San Francisco, Cal.

The total amount apportioned for this work from the appropriation "Regular supplies, 1913," was $42,601.

The two principal types of oil-burning apparatus have been installed, and it is expected from data obtained under the operation of these two systems to determine which of the two will result in the greatest fuel economy to the Government. From preliminary tests conducted at Fort Winfield Scott a fuel saving of approximately 70 per cent was made. Assuming that in the operation of such apparatus the personnel will not operate with as much care as was exercised by the board of officers which conducted the preliminary tests, it is thought safe to assume that upon the completion of the systems referred to a fuel saving at these posts of at least 50 per cent will be made.

Water meters.—Authority has been granted for the installation of water meters and service pipe lines at the following posts: Fort Williams, Me., Fort Benjamin Harrison, Ind., Fort Ethan Allen, Vt., Fort Lincoln, Nebr., Fort Leavenworth, Kans., Letterman General Hospital, Cal., Fort Wood, N. Y., Fort Winfield Scott, Cal., Jefferson Barracks, Mo., Fort Hamilton, N. Y., Fort Flagler, Wash., Fort Sam Houston, Tex., Fort Lawton, Wash., Fort Howard, Md., Fort Niagara, N. Y., Fort Mason, Cal., Presidio of San Francisco, Cal., Fort Slocum, N. Y.

These installations were made necessary by the excessive cost of water at the posts named. To date the installation has not been in sufficiently long to give definite data as to just what savings may be expected from such installations at these posts.

At Fort Slocum, N. Y., at which post meters have been installed longer than at any other posts, sufficient data has been obtained to give an idea of what might be expected from the meter installations above referred to. An analysis of water reports from Fort Slocum, where meters were installed on service pipe line, dated January 1, 1912, supplying the following buildings: Post hospital, receiving barracks, post laundry, sixth recruit company barracks, band barracks, twenty-first recruit company barracks, second recruit barracks, mess hall, twenty-fifth recruit company barracks, fourth recruit company barracks, shows the following results: Referring to a diagram which has been prepared in this office showing the per capita per day consumption for each month from January, 1912, to May, 1913, the difference between the two curves shows the quantity of water which is not accounted for reduced to the basis of per capita per day. This averages about 40 gallons.

The per capita consumption for the months of May and June, 1912, was relatively low. This can be accounted for by the fact that the number of consumers was much larger than in the following months.

From July, 1912, to February, 1913, the number of consumers remained about constant. Therefore this period should be used in studying the effect of meters on the consumption of water at that post. During this period there was a general improvement in both metered and gross rates, and the rates as determined by meters dropped off from 124 to 109 gallons per capita, or a saving of 12 per cent.

It is believed that the use of meters on service-pipe lines is the only effective means of protecting wastes and that they should be more extensively used at posts, especially where the cost of water is great, and it is essential that check readings should be made at short intervals of time and the results tabulated or diagrammatically represented in some such way as illustrated on the chart above referred to. A suitable form has been drawn up to be printed and furnished posts where meters are installed to enable a check of this kind. The fact that a large fluctuation in the number of consumers makes but a small difference in the total amount of water consumed is, in the opinion of this office, conclusive evidence that a very large percentage of the total consumption is wasted, either through leakage or improperly designed plumbing fixtures

The total sum of $8,990.14 was apportioned from the appropriation "Water and sewers, 1912," for water meters, mainly for installation in pumping and power plants at various posts.

Garbage crematories.—A new crematory was constructed at the Presidio of Monterey, Cal., at a cost of $4,390, and the old crematory stack at Fort Des Moines, Iowa, was replaced by a new one at a cost of $1,600. The total cost of construction and betterments under this head was $6,597.70.

In connection with the crematory built at the Presidio of Monterey, an oil-burning apparatus has been installed which should furnish this office with valuable comparative data as to the operation of garbage crematories under such fuel system.

Laundries, sawmills, and refrigerating plants.—The following amounts were apportioned for these classes of work:

From the appropriation "Regular supplies," for completing the construction of laundry building at Schofield Barracks, Hawaii, and the installation therein of generating sets and switchboard	$12,275.00
From the same appropriation, in small amounts, for sawmills at various posts.	578.00
From the same appropriation, in small amounts, for ice refrigerating plants.	1,135.49

Purchase of light and water.—

The total amount expended from the appropriation "Regular supplies" for the purchase of electric current during the year	$429,463.75
For the purchase of water from the appropriation "Water and sewers" there was expended the total of	237,124.17

Annual repairs to buildings, etc.—Based on the estimates of March 1, 1912, received from military posts and depots apportionments were made to departments and independent posts for annual repairs to buildings and systems, and allotments were made to each post by the division commanders within the limit of the funds available. Instructions were also given to retain a reserve balance in each department to meet unforeseen contingencies. The total amount apportioned for annual repairs from each appropriation of the fiscal year 1913, not including the Philippine Islands, was as follows:

Barracks and quarters		$584,549.67
Military post exchanges		17,440.36
Regular supplies:		
Reservation fences	$7,496.05	
Heating plants, exterior heating systems, and heating within buildings	52,631.84	
Steam-cooking systems	320.00	
Lighting plants, exterior lighting systems, and lighting within buildings	44,815.19	
Bakery buildings	3,511.12	
Ice and refrigerating plants	1,884.00	
Laundry buildings	1,157.00	
		111,815.20
Water and sewers:		
Fire apparatus	11,601.01	
Water systems and pump house	38,356.36	
Plumbing in buildings	98,027.00	
Sewerage systems, sewage-disposal plants, and crematories	10,937.84	
		158,922.21
Roads, walks, wharves, and drainage:		
Roads, curbs, gutters, and railroad tracks	60,300.00	
Walks	23,147.12	
Wharves	33,595.00	
Seawalls, retaining walls, drains and drainage	9,163.60	
Improvement of grounds	30,885.00	
General purposes in Alaska	3,600.00	
		160,690.72
Incidental expenses:		
Flagstaffs, picket lines, and electric-bell systems	4,032.00	
		4,032.00
Shooting galleries and ranges (including improvements)		32,635.71
Construction and repair of hospitals		78,189.59
Quarters for hospital stewards		5,519.96
Army transportation for railroad equipment and rolling stock		1,863.54
Total		1,155,658.96

Special repairs to buildings, etc.—In addition to the annual apportionments above stated, expenditures were authorized in the course of the past fiscal year for special repairs (the necessity for which could not be anticipated when the annual estimates were prepared) and for alterations and improvements on buildings, systems, and grounds at the various military posts and stations. The total amount expended from each appropriation for special repairs, alterations, etc., was approximately as follows:

Barracks and quarters (including screens, storm doors, etc.)	$62,246.56
Military post exchanges (including gymnastic apparatus and equipment)	11,310.67
Construction and repair of hospitals	74,382.47
Quarters for hospital stewards	2,411.35
Shooting galleries and ranges	3,763.74
Regular supplies	23,520.65
Water and sewers (including installations and renewals of plumbing in buildings)	25,062.50
Roads, walks, wharves, and drainage	46,530.88
Incidental expenses	1,067.46
Total	250,296.25

Wall lockers.—At the close of the fiscal year there had been reported shipped to military posts upon requisitions approved by this office 411 singles, 204 doubles, 237 triples, and 58 quadruples, or a total of 1,762 units. The cost of these lockers was defrayed from the appropriation "Barracks and quarters." Of the lockers above mentioned, 80 singles, 24 doubles, 34 triples were used in hospitals, thus making their cost ($2,069.94) chargeable to the appropriation "Construction and repair of hospitals," and the appropriation was accordingly reimbursed in that amount.

Losses by fire.—During the past fiscal year a quartermaster stable building at Fort Totten, N. Y., was destroyed, except brick walls, loss estimated at $6,000. At Fort Snelling, Minn., a hay shed built in 1904 at a cost of $3,600 was totally destroyed. At Columbus Barracks, Ohio, a barrack building was damaged to the extent of $4,000. At the Presidio of San Francisco, Cal., seven frame noncommissioned officers' quarters and an officers' bathhouse in the west cantonment were totally destroyed, loss estimated at $3,500. At several other posts buildings were slightly damaged by fire.

Rentals.—The total amount expended from the appropriation "Barracks and quarters, 1913," for the rental of quarters, storehouses, offices, stables, recruiting stations, drill grounds, camp grounds, etc., was $459,198.12 (this amount includes $70,000 apportioned the Philippine Islands for rental of quarters, etc., for troops in China). One room each was hired for approximately 460 noncommissioned officers on duty at posts for whom public quarters were not available, and for noncommissioned officers and privates on duty in cities under proper orders. Some of these leases were for only a portion of the year. Except where furnished in kind, heat and light for these rooms were included in the leases. Quarters with heat and light were rented at the lowest obtainable rates, ranging from $12 to $20 per month.

The regulation number of rooms were hired for the year, or portion of the year for 48 commissioned officers, including 25 in El Paso, Tex., 15 in Washington, D. C., and 5 at Vancouver Barracks, Wash. The rental per room ranged from $8 to $14 per month.

For stabling private mounts 102 leases were executed, mainly for periods of less than one year. The average rental was $10 per horse per month.

The rental of main and auxiliary recruiting stations for the year (not including lodgings) amounted to approximately $133,238.92.

Storehouses and office rooms were rented during the year in Atlanta, Boston, Chicago, Honolulu, New York, Portland, Oreg., Seattle, and Washington, D. C. Storehouses were also rented in Galveston and Texas City, Tex., and office rooms in Denver and San Francisco.

For the fiscal year 1913 Congress appropriated $49,587 under the head of "Rent of buildings, Quartermaster's Department," to cover rentals in the District of Columbia, including Field Medical Supply Depot, Army Medical School, Depot Quartermaster's Office, stables, storehouses, and quarters for officers, noncommissioned officers, and privates. The total amount expended from this appropriation was $47,107.65, leaving an unexpended balance of $2,479.35.

Land and reservations.—The amounts expended for purchase of land, a statement of changes in military reservations, and a list of revocable licenses, permits, etc., granted by the War Department during the fiscal year 1913 will be found in Exhibit 15.

The more important land purchases were at Fort Sam Houston, where $70,000 was paid for about 310 acres adjacent to the reservation, and at Plattsmouth, Nebr., where $24,000 was paid for 696 acres for a rifle range.

Philippine Islands.—From statements rendered by the Department Quartermaster, it appears that the total amount expended for each class of work from the regular annual appropriations and from special appropriations for construction work were as follows:

Construction	$1,260,447.43
Repairs	159,436.04
Rentals	35,972.92
Services	485,470.81
Total	1,941,327.20

The total amount expended for the construction work included $213,571.77 from the appropriation "Barracks and quarters, Philippine Islands," for work at various posts; $871,384.73 from the appropriation "Seacoast defenses, Philippine Islands and Hawaii," for work at Fort Mills; and $90,767.55 from the appropriation "Army storehouses, Corregidor, Philippine Islands," for the construction of storehouses and other buildings on Corregidor Island prior to March 11, 1913, when all available funds pertaining to this appropriation were transferred to the Engineer Department.

On June 30, 1913, the buildings under construction at Fort Mills, chargeable to the appropriation "Seacoast defenses, Philippine Islands and Hawaii" were 10 barrack buildings, 14 sets of officers' quarters, 4 hospital buildings, 1 hangar, and 1 car barn.

In his annual report dated August 4, 1913, the department quartermaster reports that a contract amounting to $63,700 has been let for the reconstruction of Pier No. 1 and double grain warehouse at the Manila port reservation, also that the sum of $44,516.18 was expended during the past fiscal year on the Keithley-Overton road, and that the entire road is nearly completed.

The department quartermaster states that the southern islands suffered severely during the year from typhoons, the damage at military posts in the department being estimated at $60,000.

Inclosed is a statement marked "Exhibit 16" of expenditures made during the fiscal year for the acquisition of land in the United States. Also statement showing changes in military reservations other than those made by purchase of land, marked "Exhibit 17."

TRANSPORTATION.

WATER.

Army transport service.—The service now consists of 18 ocean-going vessels, owned and operated as required for the transportation of troops, animals, and supplies for the Army. These vessels were engaged in service or stationed at the close of the fiscal year as follows:

Name.	Class.	Location.
Pacific Fleet.		
Buford	Troop ship	Out of commission, San Francisco.
Burnside	Cable ship	Undergoing repairs, navy yard, Puget Sound.
Crook	Troop ship	Out of commission, San Francisco.
Dix	Freight and animal ship	Trans-Pacific service.
Logan	Troop ship	Do.
Sheridan	....do	Out of commission, San Francisco.
Sherman	....do	Trans-Pacific Service.
Thomas	....do	Do.
Slocum	Tug	In service, San Francisco Harbor.
Atlantic Fleet.		
Kilpatrick	Troop ship	At Galveston, Texas.
McClellan	....do	Do.
Meade	....do	Do.
Sumner	....do	Do.
Philippine Fleet.		
Liscum	Troop ship	Undergoing repairs, Shanghai, China.
Merritt	....do	Inter-island service.
Seward	....do	Out of commission, Manila, P. I.
Warren	....do	Inter-island service.
Wright	....do	Do.

Movement of transports.—There have been monthly sailings from San Francisco and Manila throughout the year, although the regularity of such sailings has been somewhat interfered with by delays incident to the service.

The *Sheridan* was placed in commission and sailed in consort with the *Logan* on January 6, 1913, the two ships carrying the entire Fourth Cavalry, Twenty-fifth Infantry, and three companies of Coast Artillery Corps to Honolulu, and returned in consort with the *Sherman*, having aboard the entire Fifth Cavalry en route to station in the United States.

On May 24, 1913, the *Thomas* left San Francisco for a special trip to Honolulu, carrying two companies of Coast Artillery, one company of Signal Corps, and 975 recruits, and upon return to San Francisco resumed her regular service to the Philippines.

In February, 1913, the *Kilpatrick*, *McClellan*, and *Sumner* were hurriedly prepared for sea and dispatched for Galveston, Tex., and the *Meade* reached the same port on March 5, 1913, after transporting 1,379 officers and enlisted men, United States Marine Corps, from Philadelphia, Pa., to Guantanamo, Cuba. These vessels have remained at Galveston since that time ready for service if needed.

REPAIRS.

San Francisco.—The transports in operation from this port have been maintained in proper condition for active service by repairs at the end of each round trip, which have averaged in cost $3,556 per vessel for each voyage. The *Sherman*, *Buford*, and *Crook* have, however, been more extensively overhauled during the year, at a cost of $78,633.01, $80,958.82, and $17,455.15, respectively, to place them in satisfactory shape for service if required.

Seattle.—It was necessary to install new boilers in the *Burnside*, which, with other repairs, have cost during the year the sum of $104,148.42, while alterations and necessary repair work upon the *Dix* have amounted to $38,159.79.

Newport News.—The total cost for repairs in connection with the Atlantic fleet at both Newport News and Galveston have aggregated as follows: *Kilpatrick*, $2,212.10; *McClellan*, $1,598.45; *Meade*, $3,947.19; *Sumner*, $4,641.51.

Life-saving equipment.—On June 14, 1912, an act of Congress was approved appropriating $300,000, or so much thereof as might be necessary, to equip all Army transports with life boats and rafts necessary to accommodate every person for whom transportation facilities were provided on the said transports and the crews thereof; and with a view to giving careful consideration to this subject and determining the most practicable and advisable way of carrying out the provisions of the law above mentioned, for the transports owned and operated by the War Department, three boards were appointed by the Quartermaster General on July 27, 1912, one board to consider the question for Atlantic coast transports, one board to consider the question for Pacific coast transports, and one board to consider the question for vessels stationed in the Philippines.

These boards examined the various kinds of life-saving apparatus available and submitted for their consideration; also made various tests and trials at sea; their reports being submitted to the Chief of the Quartermaster Corps with recommendations regarding equipment considered most satisfactory and suitable for use on vessels of the transport service to fully provide satisfactory boatage for all passengers and crew for whom the vessels were otherwise fitted.

In accordance with the recommendations of these boards, contracts were executed for the construction and delivery of 176 new steel lifeboats of the Lundin decked, self-bailing type; also 87 pairs of Welin quadrant D davits; three steel self-righting and self-bailing power lifeboats; and the required number of boat chocks, gripes, fall blocks, etc., necessary to equip the transports with sufficient lifeboats to meet requirements. Contracts were also awarded for the necessary changes and other work required for the complete installation of the new equipment on the transports *Kilpatrick*, *McClellan*, *Meade*, and *Sumner*. The new equipment was installed on the trans-Pacific transports as rapidly as delivered at San Francisco while the vessels were at home port between voyages, keeping the equipment in excess of the number of passengers and crew transported.

Service for other departments.—There have been carried by transports during the year for other executive departments and for the Philippine Government passengers and freight the value of which at tariff rates would be as follows:

Navy Department	$389,457.50
Post Office Department (including 452,093 pounds mail)	197,461.79
Philippine Government	109,428.17
Other departments	1,008.06
Total	697,355.52

Work of transports.—The following is the summary of the work performed by transports during the year:

PASSENGERS.

Between—	Sailings.	Officers.	Enlisted men.	Civilians.	Total.
United States and Philippines	12	324	3,334	976	4,634
Manila and United States ports	12	331	4,785	1,958	7,074
Seattle and Manila	2		3	2	5
Interisland ports	1		12	5	17
Alaskan ports and United States	1	18	402	32	452
Cuban ports	1	43	1,336	1	1,380
Other ports	4	466	5,554	2,877	8,897
Total		1,182	15,426	5,851	22,459

CARGO.

Between—	Animals.	Freight, tons.	Remains.	Lumber.	Mail pounds.	Money, pesos or dollars.
United States and Philippines		29,232		140,100	235,632	675,062.50
Philippines and United States		10,476	83		76,944	382,995.40
Seattle and Manila	251	17,666		49,815	817	
San Francisco and Honolulu		8,796			43,298	
Other ports	192	5,565	20	141,433	96,402	
Total	443	71,735	103	331,348	452,093	1,058,057.90

Earnings and expenditures.—The net earnings of the transports during the year for the above service, based on the lowest rates offered for similar services for commercial lines, have been:

For passengers	$1,323,352.45
For cargo	655,394.93
Total	1,978,747.38

At public commercial rates the earnings would be:

For passengers	$1,323,537.45
For cargo	655,394.93
Total	1,978,932.38

The foregoing does not include the value of transporting families of officers, soldiers, or employees, or of other persons not entitled to transportation from an appropriation of the United States or the Philippine Government. The value of such gratuitous service during the year, however, aggregated $450,820.60.

The expenditure for the operation and maintenance of the transports during the year was as follows:

	In commission.	Out of commission.	Total.
Wages of officers and crews	$563,914.15	$47,175.05	$611,089.20
Repairs	192,067.07	186,457.04	378,524.11
Coal	304,013.30	2,042.35	306,055.65
Deck, engine, and stewards' supplies	413,127.98	5,471.77	418,599.75
Miscellaneous	90,492.21	13,893.07	104,385.28
Total	1,563,614.71	255,039.28	1,818,653.99

Shore expenses, including proportionate salaries of officers, commutations of officers' quarters, wages of employees, rent of offices, warehouses, wharves, etc., were as follows:

San Francisco	$40,782.02
Seattle and Tacoma	7,260.66
Newport News	7,862.04
Honolulu	5,643.94
Nagasaki	12,636.37
Manila	12,256.82
Total for this purpose	86,541.85
Total for operation and maintenance	1,818,653.99
Grand total	1,905,195.84

Included in these expenditures is the cost of operating the *Burnside* while engaged in cable work for the Signal Corps of the Army, the total of which was $177,157.33.

Inasmuch as the service rendered by the *Burnside* was not performed in the interests of the Quartermaster Corps, the expenditure therefor should be deducted, leaving the net cost to the Government on account of the transportation of troops, supplies, etc., and the maintenance of all transports, both active and inactive, during the fiscal year, $1,728,038.51.

RECAPITULATION.

	Lowest commercial rate.	Public commercial rate.
Earnings of the transports during the year	$1,978,747.38	$1,978,932.38
Expenses of operation and maintenance during same period	1,728,038.51	1,728,038.51
Savings to the Government by using transports over same service by commercial vessels	250,708.87	250,894.87

COMPARATIVE STATEMENT.

	Carried upon transports.		Earnings.	Expenses.
	Officers and enlisted men.	Freight, tons.		
1912	30,220	48,191	$2,968,481.43	$1,602,429.23
1913	16,608	71,735	1,978,747.38	1,728,038.28
In favor of 1912	14,612		989,739.05	
In favor of 1913		23,544		125,609.28

HARBOR BOAT SERVICE.

Owned service.—The department has operated during the fiscal year in the various harbors along the Atlantic, Pacific, and Gulf coasts 6 first-class steel mine planters, 2 cable steamers, 2 ferry steamers, 24 passenger and freight steamers, 28 tugs and artillery steamers, 3 lighters, 39 steam, gasoline, and electric launches, and 27 junction-box launches; a total of 131 owned vessels engaged in

Quartermaster, Artillery, and Signal work, at a total expenditure for wages of officers and crews, fuel, supplies, repairs, water, etc., of $1,092,804.97.

These vessels carried during the year 2,410,244 passengers and 158,331,007 pounds of freight.

Chartered service.—To supplement the above service, chartered vessels were operated in connection with the coast defenses of Narragansett Bay, between Newport and Fort Greble, R. I., at a cost of $11,955, and in connection with the coast defenses of Charleston, between Wilmington and Fort Caswell, N. C., at a cost of $1,944. The entire cost of the chartered service, including the cost of the hire of substitute vessels for short periods to replace owned vessels undergoing repairs and of vessels for towing targets, vessel tracking, subcaliber practice, and like purposes for the Coast Artillery, which could not be performed by the other vessels of the service, amounted to $20,196 during the fiscal year.

There were no unserviceable vessels condemned and sold during the fiscal year.

There were no new vessels constructed or purchased during the fiscal year.

PHILIPPINE INTER-ISLAND SERVICE.

Owned service.—Fifty-three voyages to various ports in the Philippine Islands and to China were made by the regular owned inter-island transports *Liscum, Merritt, Warren,* and *Wright,* and by the commanding general's dispatch boat *El Aguila,* upon which were transported during the year 17,650 passengers, 1,621 animals, 17 remains, 50,826 tons freight, 1,791,739 feet of lumber, and $1,114,779.13 United States currency entitled to Government transportation, the cost of which at commercial rates would be $413,060.77. There were also carried 6,276 passengers and 3,411 tons freight for which no credit was taken. The expenses of the service amounted to $445,573.98. After allowing the proper proportion for shore expenses chargeable to this service ($64,007.83) the net loss to the Government in the operation of the owned service over the cost of similar service at commercial rates was $96,521.04.

The army stationed in China has been provided with necessary supplies during the fiscal year by periodical voyages of the *Warren.* There were carried on those trips 22 officers, 322 enlisted men, 38 civilian employees, 5 animals, 3,700 tons supplies, and $216,845 in United States currency.

While the *Liscum* was undergoing extensive repairs at Shanghai, China, the transport sank August 26, 1912, at the dock of the firm making the repairs and was not finally raised until May 25, 1913. The cause and responsibility for the sinking has not yet been determined. The contract provided that any damage done the vessel should be made good by the contracting firm. After return to the Philippines the *Liscum* will replace the *Wright* at Zamboanga.

The *Seward* has been out of commission during the entire year, and recommendation has been made that the *Wright* and *Seward* be sold or otherwise disposed of, as they are unseaworthy and their condition will not warrant large expenditures necessary for continuance in the service.

Chartered service.—The *Samar* was under charter as a dispatch boat for the commanding general, district of Mindanao, with station at Zamboanga, from the beginning of the fiscal year until January 18, 1913, when replaced by the transport *Wright*. The vessel transported 608 passengers and 2,646 tons of freight, the cost of which at commercial rates would be $10,336.65. There were also carried 373 passengers and 9 tons freight for which no credit was taken.

The total expense of the chartered service was $21,565.89. After charging a fair proportion of the expenses of the shore establishment ($2,723.74) the net loss connected with the service was $13,952.98.

RECAPITULATION.

	Earnings.	Expenditures.
Pacific and Atlantic service	$1,798,747.38	$1,728,038.51
Philippine owned service	413,060.77	509,581.81
Philippine chartered service	10,336.65	24,289.63
Total	2,402,144.80	2,261,909.95
Net earnings of the entire transport service		140,234.85

Philippine harbor-boat service.—There have been maintained and operated at Manila and other points in the Philippine Islands during the fiscal year 51 owned launches and 158 lorchas, colliers, scows, and small boats, at a total cost of $344,711.61, including the proper proportion of the expense connected with the maintaining of the shore establishment. There were transported 371,196 passengers and 15,331,676 pounds of freight.

No vessels were constructed or purchased during the year. Ten launches were sold and a number of scows and smaller craft wrecked, destroyed, and sold. The total sum realized from such sales aggregated $15,102.34.

It was necessary to supplement the owned service with chartered lighterage during the year.

Inclosed herewith are statements showing total debits, credits, and net cost of the United States Army transport service; statements of issues made during the fiscal year 1913; number, value, and average cost of rations, by geographical departments, etc., issued during the fiscal year 1913; and statement showing the yearly and per diem cost of subsistence per man in the United States and Philippines, marked Exhibits 18, 19, 20, and 21, respectively.

LAND.

Freight and passengers.—During the fiscal year there were transported by the Quartermaster Corps 116,774 passengers, 15,060 animals, 324,448 tons of freight, $5,192,089.78 in funds, and 220 remains of officers, enlisted men, and civilians, as shown by the following statement:

	Railroad.	Commercial vessels.	Wagon.	Stage.	Express.	Total.
Passengers.						
Officers	4,677	91	214	12		4,994
Enlisted men	102,256	4,056	824	167		107,573
Civilians	3,847	342	15	3		4,207
Total	111,050	4,489	1,053	182		116,774
Animals.						
Horses	10,139	388	1		53	10,581
Mules	4,329	150				4,479
Total	14,468	538	1		53	15,060
Stores (tons).						
Quartermaster Corps	177,884	35,364	11,852		978	226,078
Ordnance	29,966	12,025	1,764		30	43,785
Medical	1,303	1,772	12		9	3,096
Engineer	1,560	1,797	37		1	3,395
Signal	1,753	919	11		8	2,691
Miscellaneous	13,223	2,551	29,627		2	45,403
Total	225,689	54,428	43,303		1,028	324,448
Remains	78	4	2		136	220
Funds		$130,834	$4,124		$5,057,131.78	$5,192,089.78

This statement indicates a decrease of 12,780 passengers from those transported during the fiscal year 1912, and an increase of 1,971 animals and 70,408 tons of freight. The decrease in number of passengers transported is due to the establishment of a colonial army for permanent service in the Philippine Islands, thereby reducing the number of troops requiring transportation between stations in the United States and the Philippine Islands. The increase in the number of animals and tons of freight transported is due to the mobilization of troops at Galveston and Texas City, Tex., requiring the large shipments of means of transportation and supplies for their use at mobilization camps. Quartermaster Corps supplies show an increase of 59,839 tons over shipments during the fiscal year 1912. Ordnance stores, an increase of 14,613 tons, due to shipments of heavy ordnance to the Philippine Islands, Hawaiian Islands, and Canal Zone. Medical stores, an increase of only 49 tons. Engineer stores, an increase of 820 tons. Signal stores, an increase of 94 tons. Miscellaneous stores (stores for other departments of the Government), an increase of 6,103 tons. No charge for transportation is made against the Quartermaster Corps appropriations for transportation of miscellaneous stores, the charges being paid from appropriations of the departments concerned.

There are inclosed herewith the following statements:

Statement showing transportation accounts for fiscal year 1913 marked "Exhibit 22."

Statement showing shipments to Manila, P. I., at the through rate of $15 per ton of 2,000 pounds, or 40 cubic feet, carrier's option, marked "Exhibit 23."

Statement showing shipments from New York City to Manila, P. I., via the Atchison, Topeka & Santa Fe system, Galveston and San Francisco, at rate of $10 per ton of 2,000 pounds, or 40 cubic feet, carrier's option, marked "Exhibit 24."

Statement showing shipments from New York City to Pacific coast points under contract with the Southern Pacific Co., at the rate of 60 cents per 100 pounds, marked "Exhibit 25."

Statement showing weights and cost of shipment, and packing for shipment, baggage of officers, noncommissioned officers, and civilian employees, marked "Exhibit 26."

Statement showing cost of military telegraph lines in Alaska, exclusive of the operations of the cable ship *Burnside* to the Quartermaster Corps, marked "Exhibit 27."

Statement showing wharves, docks, and landing places for harbor boats, marked "Exhibit 28."

Statement of cost of hire of cartage and drayage, marked "Exhibit 29."

Statement of cost of street car and ferry tickets, marked "Exhibit 30."

Statement showing shipments in deep sea commercial vessels, marked "Exhibit 31."

Statement showing transportation accounts received and acted on during the fiscal year, 1913, marked "Exhibit 31."

Statement showing automobiles and motor trucks in service; their station, purpose for which used, annual cost for supplies, operation and repairs, mileage, tonnage hauled, cost per mile for automobiles and cost per ton per mile for motor trucks, when practicable to obtain data, marked "Exhibit 32."

Statement showing cost of wagons, harness, etc., purchased during the fiscal year ended June 30, 1913, marked "Exhibit 32."

Statement showing principal movements of troops during the fiscal year, marked "Exhibit 33."

Statement showing movement of troops to mobilization camps in Texas, marked "Exhibit 33."

Test of automobile trucks.—Continuing the observations upon the operations of automobile trucks in use in the Army, with a view to determining under what conditions it is practicable to use such trucks in the Army in place of animals-drawn transportation, as at present, up to the present time all reports and observations are practically unanimous that the best type of truck for Army use over rough trails and country roads, and able to operate under all conditions, is the shaft-driven truck of comparatively light weight and capacity about equal to that of the Army escort wagon.

The Quartermaster Corps has adopted general specifications for automobile trucks, which provide for a maximum weight of 5,000 pounds for truck complete, and the carrying capacity has been fixed at 1½ tons, with a safe overload of 20 per cent.

No extensive special runs have been made by the Quartermaster Corps during the fiscal year for the purpose of testing out any particular truck, but all trucks in the military service have been carefully observed and reported upon, with a view to determining their efficiency, stability, and economical operation.

No effort has been made to avoid difficult road conditions in the operation of these trucks; nor, on the other hand, has any special test been made of extreme road conditions, the desire being to find out what the trucks will do, as nearly as possible, under service conditions.

The Quartermaster Corps has not yet arrived at definite conclusions as to all the features that will best meet the requirements for military purposes, but a number of conclusions have been reached and further tests are constantly being made at maneuver camps, and it is expected that ultimately a standard type of automobile truck can be adopted which will be satisfactory as a means of transportation of supplies, except for that portion which it is contemplated shall be kept in constant contact with troops.

During the fiscal year six automobile trucks were purchased at various Quartermaster Corps depots and maneuver camps in the United States and one in the Philippine Islands.

It is intended that wherever automobile trucks are operated a corresponding reduction of animal-drawn transportation will be made.

Test of wagons.—Six types of wagons, viz, regular Escort wagons, old Army Six, a Milburn, a Kentucky, a Holzbog, and a wagon designed by Trainmaster Purcell, Quartermaster Corps, were tested by the Cavalry equipment board at Fort Riley, Kans., on a march of 455 miles, 20 marching days. The following table shows the conclusions of the board with reference to these wagons:

Features as to carrying capacity and traction.	Army Six.	Purcell.	Escort.	Holzbog.	Milburn.	Kentucky.
Tare weight of wagon	2,290	2,370	2,100	2,580	2,360	2,450
Average daily load carried, pounds	4,000	2,800	2,500	2,500	2,500	2,500
Animals per wagon	6	4	4	4	4	4
Dimensions of bed, inches:						
Length	122	140	114	129½	129½	129½
Width	42	43½	40	48	42.6	46
Height	21	27	21	19	22.8	21.4
Grease used, pounds	3	5 qts. oil.	2½	4	6	6
Number of times stuck in mud						
Height of front wheels	44	46	44	36	38	38
Times turned over						
Parts replaced						
Number of delays						
Condition at start	Good.	Good.	Good.	Good.	Good.	Good.
Condition at finish	Good.	Good.	Good.	Good.	Good.	Good.
Relative rank as to ease of pull	1	2	3	4	5	6
Relative rank as to general excellence	1	2	3	4	5	6

The weight of the Purcell wagon could be reduced by about 100 pounds by taking out the double bottom with which it has been equipped on some past occasion for some special purpose. This wagon is sufficiently heavy to haul five or six thousand pounds and would make a fine wagon for six mules. In general, it appears that the tare weight of each type of wagon was in excess of what is necessary for the load carried. Even the Escort wagon at 2,100 pounds is about one-third heavier than the commercial wagon designed for the same or heavier loads. There are several types of ordinary farm wagons guaranteed by makers for loads of 5,000 to 6,500 pounds, and which only weigh in the neighborhood of 1,500 pounds. While this is probably a trifle too light for Army use, it is believed that a reduction to the neighborhood of this figure could be approximated.

The mules on the Escort, Purcell, and Army Six wagons were in good shape at the end of the test. Some of the mules on the other wagons were in bad shape. The Kentucky wagon was the heaviest puller. All were four-mule wagons except the Army Six. The Purcell wagon had a carrying capacity which would have permitted a heavier load, and had its load been increased to 4,500 pounds and the number of mules to six, its superiority over the Escort wagon would have been more marked and its inferiority to the Army Six but slight.

From the evidence developed during the march the board is of the opinion that the relative rank of the types of wagons tried is, as to general desirability for field service, as follows: Army Six, Purcell, Escort, Holzbog, Milburn, Kentucky.

Consolidation of disbursing offices settling railroad and steamship companies' transportation accounts.—As shown in the annual report of the Quartermaster General for the fiscal year 1912, the disbursing offices of the Quartermaster's Department were on July 1, 1912, reduced to four, viz: Depot Quartermaster, Washington, D. C.; Chief Quartermaster, Central Division, Chicago, Ill.; Depot Quartermaster, St. Louis, Mo.; and the Depot Quartermaster, San Francisco, Cal. With the establishment of the depot of the Quartermaster Corps at Chicago, Ill., the accounts formerly settled by the Chief Quartermaster, Central Division, Chicago, Ill., were transferred to the Depot Quartermaster, Chicago, Ill., but no further consolidation of offices settling accounts was made during the fiscal year 1913. The reduction of the number of offices settling these transportation accounts from 15 to 4 has proven entirely satisfactory, and has resulted in economy and a better handling of transportation accounts of the various carriers concerned.

Schedule of land-grant and bond-aided railroads of the United States.—Circular No. 16, Quartermaster General's Office, was issued, effective July 1, 1912, carrying a complete list of the land-grant and bond-aided railroads of the United States, with the laws applicable thereto, and a map showing in colors the various railroads which had been granted lands or bonds by the Government to aid in their construction, in return for which transportation services for the Government are performed at reduced rates. This circular also contains a schedule showing other carriers operating over any of the land-grant portions of the land-grant lines and is of great assistance to the disbursing officers of the Quartermaster Corps settling transportation accounts as well as to the railroads of the United States.

Freight and passenger land-grant equalization agreements and list of carriers participating.—Due to certain changes in the agreements and additions to the list of carriers participating, it was found necessary to reissue circular containing this information, and Circular No. 6, O. C. Q. M. C., was therefore issued on March 1, 1913, containing freight and passenger equalization agreements and the list of carriers participating, as formerly shown in Circular No. 23, Q. M. G. O., 1911. Practically all the important carriers in the United States have agreed to accept the same net rates on both passenger and freight traffic of the Army as are effective via the land-grant lines. This is of great benefit to the Government, inasmuch as it allows a choice of routing over practically any line, instead of confining the Government to the use of land-grant lines in order to secure the rates available via such lines.

Conferences of the common carriers engaged in the transportation of passengers and freight for the Army.—During the fiscal year 1913 representatives of the Quartermaster Corps attended conferences of the various carriers concerned in the handling of transportation of the Army, with a view to adjusting any matters of controversy and also with a view to securing as low rates as possible. These conferences resulted in certain changes being made in freight classification which were of benefit to the Government and also in securing an adjustment of passenger rates out of Columbus, Ohio, and New York City, by which the War Department will be enabled to save about $5,000 per annum on passenger transportation out of these points.

A conference was also had at Chicago, Ill., with the representatives of all the western passenger lines in connection with the reissue of the military tariffs to cover all points west of Chicago and St. Louis between which there was any considerable volume of traffic for the War Department. On account of unsettled rate conditions in this territory the military tariff in question has not yet been reissued, but it is contemplated to reissue the same within the next few months. This tariff is of great benefit to the disbursing officers of the Quartermaster Corps and the carriers concerned, inasmuch as all the net fares established on the basis of the greatest land-grant deduction are published therein, obviating the necessity of the carriers and the disbursing officers figuring each of these fares in detail whenever any traffic moves.

Philippine Islands.—Attached hereto, marked "Exhibit 34," is a statement showing the number of passengers, animals, and stores transported in the Philippine Islands during the fiscal year 1913, also funds and remains.

Statement marked "Exhibit 34," showing wharves, docks, and landing places leased or hired.

Statement marked "Exhibit 35," showing personal effects of officers, noncommissioned officers, and civilians shipped at public expense during the fiscal year.

Statement marked "Exhibit 35," showing cost of principal and special movements of troops during the fiscal year.

Statement marked "Exhibit 35," showing automobiles and motor trucks on hand June 30, 1913.

REMOUNT SERVICE.

Statement showing animals purchased by the Quartermaster Corps during the fiscal year 1913.

Kind.	Number.	Total cost.	Average cost.	
			1913	1912
Cavalry horses	1,070	$179,186.39	$167.46	$180.60
Artillery horses	31	5,874.50	189.50	259.18
Young horses, remounts	1,331	157,612.36	118.42	129.12
Draft horses	27	6,217.50	230.28	300.00
Draft mules	837	205,678.75	245.73	230.00
Draft mules, young	71	10,307.75	145.18	....
Pack mules	230	43,346.00	188.46	209.16
Riding mules	87	18,276.50	210.07	209.38
Dogs	42	2,050.00	48.81	....

The average cost of mounts for the year is $140.90.

During the year 1,740 animals were condemned, sold, etc., and 613 died, a total of 2,353 animals. There remained on hand on June 30, 1913: Cavalry horses, 12,118; Artillery horses, 3,155; draft horses, 1,009; riding horses, 1,527; draft mules, 5,881; pack mules, 1,478; riding mules, 382; bell mules, 13; dogs, 168; total, 25,731.

Fort Keogh Remount Depot, Fort Keogh, Mont.:	
Horses on hand July 1, 1912	789
Horses received during the fiscal year 1913	602
Total on hand and received	1,391
Issued during the year—	
Cavalry horses	483
Artillery horses	161
Riding horses	93
Sold to officers	15
Died	48
Otherwise disposed of	24
Total disposed of	824
Balance on hand, June 30, 1913	567
Fort Reno Remount Depot, Fort Reno, Okla.:	
Horses on hand July 1, 1912	513
Horses received during the fiscal year 1913	668
Total on hand, received	1,181
Issued during the year—	
Cavalry horses	288
Artillery horses	18
Riding horses	12
Sold to officers	19
Died	20
Otherwise disposed of	11
Total disposed of	368
Balance on hand June 30, 1913	813
Young mules on hand	48
Front Royal Remount Depot, Front Royal, Va.:	
Horses on hand July 1, 1912	396
Horses received during the fiscal year 1913	286
Total on hand and received	682
Issued during the year—	
Cavalry horses	120
Riding horses	28
Sold to officers	34
Died	41
Otherwise disposed of	2
Total disposed of	225
Balance on hand June 30, 1913	457
Summary of remount depots:	
Horses on hand July 1, 1912	1,698
Horses received during the fiscal year 1913	1,556
Total on hand and received	3,254

Summary of remount depots—Continued.

Issued during the year—	
Cavalry horses	891
Artillery horses	179
Riding horses	133
Sold to officers	68
Died	109
Otherwise disposed of	37
Total disposed of	1,417
Balance on hand June 30, 1913	1,837

J. B. Aleshire,
Chief Quartermaster Corps.

Exhibit 1.

	Officers of the Quartermaster Corps.							Officers of the line detailed as acting quartermasters.			
	Rank.							Rank.			
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	Total.	Captain.	Lieutenant.	Total.	Grand total.
Office Chief Quartermaster Corps	1	2	4	2	1	5	15	....	....	....	15
Department quartermasters and assistants:											
Eastern Department (also chief quartermaster, First Division) (*a*)	....	....	1	....	....	....	5	....	....	....	5
Assistants (1 major and captain assistant to chief quartermaster, First Division) (*b*)	....	....	....	....	3	1					
Central Department (lieutenant colonel, assistant, temporarily)	....	....	....	....	....	....	....	....	....	....	....
Assistants (colonel, also chief quartermaster, Second Division; 1 lieutenant colonel and captain, assistants to chief quartermaster, Second Division) (*c*)	....	....	1	2	1	1	5	....	....	....	5
Southern Department (also chief quartermaster, Cavalry Division) (*d*)	....	....	1	....	....	....	3	....	....	....	3
Assistants	....	....	....	1	....	1					
Western Department (also chief quartermaster, Third Division) (*e*)	....	....	1	....	....	....	6	....	....	....	6
Assistants (lieutenant colonel, also depot quartermaster, Galveston, Tex., temporarily) (*f*)	....	....	1	1	1	2					
Hawaiian Department (also depot quartermaster, constructing quartermaster, and in charge of the Army Transport Service, Honolulu) (*g*)	....	....	....	....	1	....	4	....	....	....	4
Assistants	....	....	....	....	....	3					
Philippine Department	....	....	1	....	....	....	9	....	....	....	9
Assistant, land-transport quartermaster	....	....	....	....	....	1					
Assistants	....	....	1	1	3	2					
Chief quartermasters and assistants:											
First Division	....	....	....	....	....	....	....	....	....	....	(*a*)
Assistants	....	....	....	....	....	....	....	....	....	....	(*b*)
Second Division	....	....	....	....	....	....	....	....	....	....	....
Assistants (including major, depot quartermaster, Chicago, Ill. (*h*); also assistant to quartermaster, Fort Riley, Kans., temporarily) (*i*)	....	....	....	....	1	2	3	....	....	....	(*c*) 3
Cavalry Division	....	....	....	....	....	....	....	....	....	....	(*d*)
Third Division	....	....	....	....	....	....	....	....	....	....	(*e*)
Assistants (lieutenant colonel, major, and 1 captain, assistants to department quartermaster) (*p*)	....	....	....	....	....	....	....	....	....	....	....

EXHIBIT 1—Continued.

	Officers of the Quartermaster Corps.							Officers of the line detailed as acting quartermasters.			Grand total.
	Rank.						Total.	Rank.		Total.	
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.		Captain.	Lieutenant.		
General depots:											
New York, N. Y				1			5				5
Assistants				1	1	2					
Philadelphia, Pa			1				5				5
Assistants					3	1					
Jeffersonville, Ind. (captain, assistant, temporarily in charge)											
Assistant						1	1				1
San Francisco, Cal. (also in charge general superintendent's office, Army Transport Service) (j)				1			6				6
Assistants				1	3	1					
Manila, P. I					1		6				6
Assistants						5					
St. Louis, Mo				1			3				3
Assistants					1	1					
Omaha, Nebr				1			2				2
Assistant						1					
Washington, D. C. (also constructing quartermaster)				1			3				3
Assistants (1 major, chief quartermaster, Gettysburg Camp) (k)					2						
Boston, Mass. (also constructing quartermaster)			1				2				2
Assistant				1							
Galveston, Tex							5				(f) 5
Assistants						5					
Chicago, Ill					h1		2				2
Assistant						1					
Seattle, Wash. (also in charge of transport service on on Puget Sound) (n)					1		2				2
Assistant						1					
El Paso, Tex						1	1				1
Fort Keogh remount depot						1	2				2
Assistant						1					
Fort Reno remount depot						1	2				2
Assistant						1					
Front Royal remount depot (also constructing quartermaster)						1	2				2
Assistant						1					
Depots and purchasing and distributing offices:											
Honolulu, Hawaii											(g)
New Orleans, La. (also constructing quartermaster)						1	1				1
Nagasaki, Japan						1	1				1
St. Paul, Minn					1		1				1
Tientsin, China						1	1				1
Portland, Oreg				1			1				1
Atlanta, Ga						1	1				1
Kansas City, Mo. (also assistant to chief quartermaster, Gettysburg Camp) (l)					1		1				1
Fort Gibbon, Alaska, special disbursing agent									1	1	1
Purchasing animals						1	1				1
Depot for animals awaiting shipment to Philippine Islands (also post and construction quartermaster)						1	1				1
Post quartermasters					11	21	32				32
Assistants to post quartermasters						i10	10				10
Constructing quartermasters				2		1	3				3
Assistants to constructing quartermasters						3	3				3
Post and constructing quartermasters					13	9	22	4	8	[1] 12	34
District, post, and constructing quartermasters					m1	3	4				4
District and post quartermaster						1	1				1
Gettysburg Camp, chief quartermaster											(k)
Assistants						1	1				l 1

[1] In addition to line duties.

EXHIBIT 1—Continued.

	Officers of the Quartermaster Corps.							Officers of the line detailed as acting quartermasters.			
	Rank.							Rank.			
	Major general.	Brigadier general.	Colonel.	Lieutenant colonel.	Major.	Captain.	Total.	Captain.	Lieutenant.	Total.	Grand total.
Transport service:											
San Francisco, Cal	....	....	....	....	....	....	....	....	....	....	(f)
Honolulu, Hawaii	....	....	....	....	....	....	....	....	....	....	(g)
Newport News, Va	....	....	....	....	....	....	....	....	....	....	(m)
Puget Sound, Wash	....	....	....	....	....	....	....	....	....	....	(n)
Manila, P. I	....	....	....	....	....	....	....	....	....	....	(o)
Military prisons	....	....	....	[1] 1	1	1	3	....	....	....	3
Army War College	....	....	....	....	1	....	1	....	....	....	1
In hospital for observation and treatment	....	....	....	....	....	1	1	....	....	....	1
En route changing station	....	....	....	....	....	1	1	....	....	....	1
On leave of absence	....	....	1	....	....	....	1	....	....	....	1

RECAPITULATION.

Office Chief Quartermaster Corps	1	2	4	2	1	5	15	....	....	....	15
Department quartermasters	....	....	4	....	1	....	5	....	....	....	5
Assistants to department quartermasters	....	....	3	5	9	11	28	....	....	....	28
Chief quartermasters of divisions	....	....	....	....	....	....	....	....	....	....	(a c d e)
Assistants to chief quartermasters of divisions	....	....	....	....	1	2	3	....	....	....	(b h i j p)
Philippine Department (other than assistants to department quartermaster)	....	....	....	1	5	17	23	....	....	....	23
General depots—in charge	....	....	2	5	2	4	13	....	....	....	13
Assistants	....	....	....	3	10	18	31	....	....	....	31
Depots and purchasing and distributing offices—in charge	....	....	....	1	2	4	7	....	1	1	8
Post quartermasters	....	....	....	....	7	14	21	....	....	....	21
Assistants	....	....	....	....	....	9	9	....	....	....	9
Constructing quartermasters	....	....	....	1	....	1	2	....	....	....	2
Assistant	....	....	....	....	....	1	1	....	....	....	1
Post and constructing quartermasters	....	....	....	....	13	8	21	4	8	[2] 12	33
District, post, and constructing quartermasters	....	....	....	....	1	3	4	....	....	....	4
Transport service—shore duty	....	....	....	....	....	....	....	....	....	....	(f g m n o)
Military prisons	....	....	....	[1] 1	1	1	3	....	....	....	3
Army War College	....	....	....	....	1	....	1	....	....	....	1
En route changing station	....	....	....	....	....	1	1	....	....	....	1
In hospital for observation and treatment	....	....	....	....	....	1	1	....	....	....	1
On leave of absence	....	....	1	....	....	....	1	....	....	....	1
Gettysburg Camp	....	....	....	....	....	1	1	....	....	....	(k l)
District and post quartermaster	....	....	....	....	....	1	1	....	....	....	1
Total	1	2	14	19	53	102	191	4	9	13	204
In the United States	1	2	12	17	45	83	160	4	9	13	173
In the Philippine Islands	....	....	2	2	8	19	31	....	....	....	31
Total	1	2	14	19	53	102	191	4	9	13	204

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[1] Commanding and in charge of construction.

[2] In addition to line duties.

EXHIBIT 3.

Statement showing number of men, by grades, apportioned to the different departments and other stations, including Philippine Department, and number of positions filled and unfilled, as of June 30, 1913.

	Master electrician.	Sergeants, first class.	Sergeants.	Corporals.	Cooks.	Privates, first class.	Privates.	Total.	Unfilled.
UNITED STATES.									
Eastern Department:									
Apportioned	1	10	159	125	4	498	152	949	....
Filled	1	9	155	120	4	473	138	900	49
Central Department:									
Apportioned	1	....	85	57	10	371	63	587	....
Filled	1	....	78	56	9	356	58	558	29
Western Department:									
Apportioned	....	3	75	75	7	319	70	549	....
Filled	....	3	67	67	6	280	84	507	42
Southern Department:									
Apportioned	1	1	39	42	12	333	41	469	....
Filled	1	1	39	27	10	230	53	361	108
Hawaiian Department:									
Apportioned	....	1	37	25	3	139	21	226	....
Filled	....	1	30	22	3	129	16	201	25
Other stations:									
Apportioned	1	11	122	69	....	143	93	439	....
Filled	1	9	76	51	....	91	61	289	150
Totals:									
Apportioned	4	26	517	393	36	1,803	440	3,219	....
Filled	4	23	445	343	32	1,559	410	2,816	....
Unfilled	....	3	72	50	4	244	30	403	403
PHILIPPINE DEPARTMENT.									
Apportioned	....	....	114	38	9	310	30	501	....
Filled	....	....	80	36	5	94	25	240	....
Unfilled	....	....	34	2	4	216	5	261	261
Grand totals:									
Apportioned	4	26	631	431	45	2,113	470	3,720	....
Filled	4	23	525	379	37	1,653	435	3,056	....
Unfilled	....	3	106	52	8	460	35	664	664

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EXHIBIT 4.

Financial statement, June 30, 1913, fiscal year 1913.

By acts of Congress there was credited to the regular service of the Quartermaster's Department, for the fiscal year ending June 30, 1913, the sum of	$31, 102, 563. 98	
During the fiscal year 1913 there was deposited to the credit of said appropriations, from the various sources, the sum of	1, 195, 936. 22	
Total		$32, 298, 500. 20
Of this there was remitted to disbursing officers the sum of	29, 022, 237. 99	
Also there was paid on account of department and Treasury transfers the sum of	12, 328. 70	
Also there was paid on account of settlements made at the Treasury the further sum of	145, 187. 19	
Total		29, 179, 753. 88
Leaving a balance on hand July 1, 1913, available for payment of outstanding obligations, the sum of		3, 118, 746. 32
On July 1, 1912, there was on hand from the regular appropriations for the service of the Quartermaster's Department pertaining to the fiscal year 1912, the sum of	$4, 709, 723. 81	
From appropriations of other fiscal years, also all special and indefinite appropriations, the sum of	4, 131, 575. 02	
Also there was appropriated and allotted during the fiscal year ending June 30, 1913, the sum of	2, 515, 366. 95	
By department and Treasury transfers, etc	357, 743. 99	
Also during the fiscal year 1913 there was deposited to the credit of all appropriations (other than those of the fiscal year 1913, regular, as shown above) from various sources, the sum of	3, 397, 185. 91	
Total		$15, 111, 595. 68
Of this there was remitted to disbursing officers the sum of	$8, 306, 751. 79	
Paid out on account of settlements made at the Treasury	686, 437. 61	
Department and Treasury transfers	484, 998. 90	
Carried to surplus fund	2, 010, 205. 93	
Total		11, 488, 394. 23
Leaving a balance on hand July 1, 1913, available for outstanding obligations, the sum of		3, 623, 201. 45

SUBSISTENCE DEPARTMENT.

Subsistence of the Army, 1913.

Appropriations by Congress for the fiscal year ending June 30, 1913, the sum of	$9, 497, 080. 42	
Deposited by officers, from various sources	812, 426. 43	
Total		$10, 309, 506. 85
Remitted to disbursing officers during the fiscal year 1913, the sum of	10, 194, 188. 06	
Paid out on settlements made at the Treasury	16, 478. 89	
Total		10, 210, 666. 95
Leaving a balance on hand July 1, 1913, available for outstanding obligations, the sum of		98, 839. 90

Fiscal years 1912, 1911, 1910, etc.

Balance in the Treasury, July 1, 1912	$838, 543. 51	
Appropriated by Congress during fiscal year 1913	629, 642. 61	
Department allotments	20, 000. 00	
Deposits by officers, from various sources	69, 588. 56	
Total		$1, 557, 774. 68
Remitted to disbursing officers during fiscal year ending June 30, 1913, the sum of	$898, 747. 12	
Department transfers	243, 820. 93	
Settlements made at the Treasury	3, 306. 24	
Carried to surplus fund	7, 648. 32	
Total		1, 153, 522. 61
Leaving a balance on hand July 1, 1913, available for outstanding obligations, the sum of		404, 252. 07

PAY DEPARTMENT.

Pay, etc., of the Army, 1913.

Appropriations by Congress for the fiscal year ending June 30, 1913, the sum of	$46, 456, 432. 38	
Deposits by officers, from various sources	833, 954. 35	
Total		$47, 290, 386. 73
Remitted to disbursing officers during the fiscal year 1913, the sum of	$46, 552, 949. 42	
Paid out on settlements made at the Treasury	277, 234. 74	
Total		46, 830, 184. 16
Leaving a balance in the Treasury available for outstanding obligations, July 1, 1913, the sum of		460, 202. 57

Fiscal years 1912, 1911, 1910, etc.

Balance in Treasury July 1, 1912	$3, 136, 943. 51	
Appropriated by Congress during fiscal year 1913	4, 816, 171. 38	
Department allotments	494, 603. 46	
Deposits by officers, from various sources	491, 736. 98	
Total		$8, 939, 454. 93
Remitted to disbursing officers during the fiscal year ending June 30, 1913, the sum of	$4, 760, 845. 68	
Department transfers	35, 558. 32	
Settlements made at the Treasury	383, 129. 94	
Carried to surplus fund	274, 670. 18	
Total		5, 454, 204. 12
Leaving a balance on hand available for outstanding obligations July 1, 1913, the sum of		3, 485, 250. 81

RECAPITULATION.

Remitted to disbursing officers and paid out on Treasury settlements, etc., from appropriations of the fiscal year ending June 30, 1913, the sum of	$86, 220, 604. 99	
And from appropriations of other fiscal years and special or indefinite appropriations and to surplus fund	18, 096, 120. 96	
Total		$104, 316, 725. 95

Balance in the Treasury on July 1, 1913, of appropriations for the regular service	$3,677,748.79	
And of all other fiscal years and special or indefinite appropriations	7,512,704.33	
Total		$11,190,493.12
Grand total for the fiscal year ending June 30, 1913, of all appropriations, the sum of		115,507,219.07

EXHIBIT 5.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912.

APPROPRIATION "REGULAR SUPPLIES."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class A, supplies.	Quartermaster depots.	$34,259.05	$41,838.76			
	Independent stations and constructing quartermasters.	13,811.06	30,925.53			
	Central division	63,934.98	61,381.15			
	Eastern division	73,670.36	69,605.02			
	Western division	66,060.47	54,143.80			
	Total Class A, supplies.	251,735.92	257,894.26	$6,158.34		
Class II, services.	Quartermaster depots, independent stations, and constructing quartermasters.	1,664.20	1,081.68			
	Central division	483.64	819.92			
	Eastern division	1,124.63	1,406.34			
	Western division	715.15	570.70			
	Total Class II, services.	3,987.62	3,878.64		$108.98	
Class I, personal	Civilian employees	163,811.32	165,007.49			
	Extra duty	1,647.50	1,241.10			
	Total Class I, personal.	165,458.82	166,248.59	789.77		
Class I, nonpersonal.	Heat, purchase of, account rentals, including recruiting stations.	118,284.65	103,964.47			
	Light, purchase of, electric current and gas, including light as part of rental of quarters, etc.	445,601.33	453,150.77			
	Subscriptions, newspapers and periodicals.	6,330.91	5,966.00			
	Printing blank forms, Pay and Quartermaster's Departments, and orders, etc., at headquarters of divisions and departments.	59,595.91	66,903.07			
	Total, Class I, nonpersonal.	629,812.80	629,984.31	171.51		
Class B, supplies, and Class III, services.	Annual repairs and maintenance, heating apparatus.	52,631.84	66,431.03			
	Annual repairs lighting plants.	48,815.19	44,903.88			
	Total, Classes B and III.	101,447.03	114,334.91	12,887.88		

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "REGULAR SUPPLIES"—Continued.

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
New construction, installations, and betterments.	Appliances for cooking and serving food at posts.	$942.88	$10,057.50	....	....	....
	Cold storage, rental of.	1,230.00	1,655.00	....	....	....
	Fences, construction and repair of.	18,888.70	43,070.11	....	....	....
	Heating apparatus, installations in connection with new construction.	31,898.30	30,940.95	....	....	....
	Heating apparatus, renewals and installations other than in connection with new construction.	76,552.34	88,502.00	....	....	....
	Ice machines, installations.	....	2,330.00	....	....	....
	Ice machines, maintenance of.	3,131.34	1,240.54	....	....	....
	Lighting fixtures in connection with construction of new buildings.	25,391.30	8,209.51	....	....	....
	Lighting plants, renewals and installations.	47,327.27	254,038.34	....	....	....
	Post bakeries, construction and repair of.	41,286.91	13,979.99	....	....	....
	Laundries, construction and repair of.	12,325.00	33,307.66	....	....	....
	Total new construction, installations, and betterments.	258,974.04	487,331.60	$228,357.56	....	....
Miscellaneous..	Advertising, including printing of specifications.	2,084.87	3,202.13	....	....	....
	Mexican border (supplies and services).	....	90,645.34	....	....	....
	Depot stock, Maneuvers Division.	....	547.59	....	....	....
	Relief of flood sufferers	....	44,724.70	....	....	....
	Total miscellaneous.	2,084.87	139,119.76	137,034.89	....	....
Class D, supplies.	Includes procurement of track scales, wagon scales, and other supplies not included in Class A, incandescent lamps.	32,556.35	87,802.54	....	....	....
	Typewriters, purchase and repair of.	3,284.80	16,523.52	....	....	....
	Total Class D, supplies.	35,841.15	104,326.06	68,484.91	....	....
Fuel, forage, and mineral oil.	Fuel..................	1,910,190.91	2,049,258.95	....	....	....
	Forage and straw......	2,886,186.77	2,655,740.03	....	....	....
	Mineral oil............	54,601.42	56,972.25	....	....	....
	Total fuel, forage, and mineral oil.	4,850,979.10	4,761,971.23	....	$89,007.87	....

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "REGULAR SUPPLIES"—Continued.

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class IV, services.	Class IV, services, (miscellaneous).	$4,583.26	$11,848.92	$7,265.66		
	Total expenditures, United States.	6,304,904.61	6,676,938.28			
	Apportioned the Philippine Islands, for all purposes of the appropriation.	1,323,555.60	1,346,575.75	23,020.15		
	Total United States and Philippine Islands.	7,628,460.21	8,023 514.03			$395,053.82
	Amount of the appropriation.	7,557,773.00	8,333,387.33	775,614.33		
	Credit on account of sales, etc.	76,096.54				
	Total amount available for expenditure.	7,633,869.54				
	Unexpended balance.	5,409.33	309,873.30			

APPROPRIATION "EQUIPMENT OF OFFICERS' SCHOOLS AT MILITARY POSTS."

Class A, supplies.	Central Division	$327.71	$650.00			
	Eastern Division	300.00	800.00			
	Western Division	335.00	590.39			
	Independent stations	54.95	89.23			
	Total Class A, supplies.	1,017.66	2,129.62	$1,111.96		
Class D, supplies.	Instruments purchased by Engineer Department.	1,500.00	4,000.00			
	Purchases by Quartermaster's Department.					
	Total Class D, supplies.	1,500.00	4,000.00	2,500.00		
	Apportioned Philippine Islands.	2,275.00	3,012.50	737.50		
	Total United and Philippine Islands.	4,792.66	9,142.12			$4,349.46
	Amount of the appropriation.	6,000.00	9,350.00	3,350.00		3,350.00
	Unexpended balance.	1,207.34	207.88			

APPROPRIATION "INCIDENTAL EXPENSES."

Class A, supplies.	Quartermaster depots.	$18,265.20	$23,191.00			
	Independent stations and constructing quartermasters.	8,885.27	15,940.46			
	Central Division	40,658.37	40,822.74			
	Eastern Division	24,659.08	23,675.00			
	Western Division	30,389.50	26,122.53			
	Blacksmith coal	6,682.65	5,199.04			
	Total Class A, supplies.	129,540.07	134,950.77	$5,410.70		

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "REGULAR SUPPLIES"—Continued.

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class II, services.	Depots and independent stations.	$4,723.96	$4,361.71			
	Central Division	6,318.21	4,817.36			
	Eastern Division	4,970.53	4,129.56			
	Western Division	3,926.10	4,361.71			
	Total Class II, services.	19,938.80	17,670.34		$2,268.46	
Class I, personal services.	Civilian employees	972,863.45	999,296.00			
	Extra duty	87,857.85	142,122.31			
	Deserters, apprehension of.	70,356.52	56,747.34			
	Donations to dishonorably discharged prisoners.	13,920.00	11,310.00			
	Total Class I, personal services.	1,144,997.82	1,209,475.65	$64,477.83		
Class I, nonpersonal services.	Shoeing animals	18,342.71	20,123.77			
	Telegrams, payment of.	52,659.62	45,891.04			
	Telephones, rental of	32,238.75	31,931.74			
	Total Class I, nonpersonal services.	103,241.08	97,946.55		5,294.53	
Recruiting	Incidental expenses of recruiting.	111,263.69	96,622.32		14,641.37	
Miscellaneous	Time, fire-alarm service, notarial fees, and other services not herein specified.	8,938.06	7,117.56			
	Care of post cemeteries.	4,474.71	5,385.31			
	Advertising	497.36	279.76			
	Depot stock, Maneuvers Division.	2,053.24	2,166.24			
	Mexican border (supplies and services).		16,535.10			
	Relief of flood sufferers.		3,051.62			
	Total miscellaneous.	15,963.37	34,535.59	18,572.22		
Class D, supplies.	Flagstaffs, surgeons' instruments, electric bells, and supplies for drawing instruments, and all supplies not classified as "A."	26,427.20	47,530.14			
	Technical books	722.75	787.00			
	Total Class D, supplies.	27,149.95	48,317.14	21,167.19		
	Total United States.	1,552,094.78	1,639,518.36			$87,423.58
	Apportioned the Philippine Islands.	286,962.23	328,560.00			
	Total United States and Philippine Islands.	1,839,057.01	1,968,078.36	121,021.35		121,021.35
	Amount of the appropriaton.	1,886,000.00	2,100,000.00			214,000.00
	Unexpended balance.	46,942.99	131,921.64			

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "HORSES FOR CAVALRY, ARTILLERY, ENGINEERS, ETC."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class D	Purchase of horses, United States and Philippine Islands.	$231,792.55	$316,128.56			
Class IV	Advertising, etc.	253.79	909.94			
Miscellaneous	Land, purchase of		200,000.00			
Class I, personal services.	Civilian employees	67,561.50				
	Total expenditures.	299,607.84	517,038.50	$217,430.66		$217,430.66
	Amount of the approtion.	300,000.00	517,165.50	217,165.50		
	Unexpended balance.	392.16	127.00			

APPROPRIATION "BARRACKS AND QUARTERS."

Class A, supplies.	Supplies to independent stations, tools, etc.	$1,306.18	$1,910.40	$604.22		
Class D, supplies.	Supplies, general	4,115.86	4,460.60	344.74		
Class I, personal	Civilian employees	93,090.57	97,964.50			
	Extra duty	8,422.23	10,736.25			
	Total Class I, personal.	101,512.80	108,700.75	7,187.95		
Class I, nonpersonal.	Annual rentals	389,198.12	447,716.90	58,518.78		
Class II	Services, general	17,685.25	14,211.70		$3,473.55	
Class IV, services.	Advertising	660.45	1,546.88			
	Miscellaneous	12,258.80	7,142.41			
	Total Class IV, services.	12,919.25	8,689.29		4,229.96	
Classes B and III.	Annual repairs	584,549.67	620,886.22	36,336.55		
Miscellaneous	Minor new construction.	85,786.76	130,744.48			
	Refrigerators	8,811.30	9,919.45			
	Screens, storm doors, etc.	18,904.36	26,532.37			
	Special repairs, alterations, etc.	43,342.20	131,090.72			
	Wall lockers	45,718.79	35,077.08			
	Furniture	1,310.14	6,366.44			
	New construction	280,864.51	55,585.44			
	Philippine Islands	70,000.00	23,000.00			
	Total miscellaneous.	554,738.06	418,315.98		136,422.08	
	Total expenditures.	1,666,025.19	1,624,891.84		41,133.35	
	Amount of the appropriation.	1,700,000.00	1,634,350.00		65,649.50	
	Unexpended balance.	33,974.81	9,458.16			

Exhibit 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "MILITARY POST EXCHANGES."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Classes B and III.	Annnal repairs	$17,440.36			$17,440.36	
Class D	Bowling alley and gymnasium supplies, etc.	3,556.31	$12,844.98	$9,228.67		
Class IV	Construction and equipment.	7,754.56	16,787.09	9,032.53		
	Total United States.	28,751.23	29,632.07			
	Apportioned the Philippine Islands.	10,000.00	9,000.00			
	Total United States and Philippine Islands.	38,751.23	38,632.07		119.16	
	Amount of the appropriation.	40,000,00	40,000.00			
	Unexpended balance.	1,248.77	1,367.93			

APPROPRIATION "TRANSPORTATION OF THE ARMY AND ITS SUPPLIES."

Class A, supplies.	Depots, independent stations, and constructing quartermasters.	$129,225.03	$145,315.19			
	Central Division	100,129.23	92,078.22			
	Eastern Division	91,722.58	88,772.67			
	Western Division	81,989.29	74,513.30			
	Total Class A, supplies.	403,066.13	400,679.38		$2,386.75	
Class II, services.	Depots, independent stations, etc.	23,704.85	18,142.13			
	Central Division	23,551.26	18,441.53			
	Eastern Division	21,230.08	15,999.40			
	Western Division	13,982.65	9,537.76			
	Total Class II, services.	82,468.84	62,120.82		20,348.02	
Class I, personal services.	Civilian employees	2,630,183.96	2,682,760.13			
	Extra duty	12,793.60	29,545.99			
	Reimbursement travel expenses.	50,562.36	35,516.89			
	Total Class I, personal services.	2,693,539.92	2,747,823.01	54,283.09		
Class I, nonpersonal services.	Drayage	79,536.39	78,924.82			
	Tolls and ferriages	697.45	5,299.00			
	Wahrfage	61,490.00	54,650.12			
	Transportation accounts.	3,695,668.29	3,754,982.96			
	Total Class I, nonpersonal services.	3,837,392.13	3,893,856.90	56,464.77		

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "TRANSPORTATION OF THE ARMY AND ITS SUPPLIES"—Contd.

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Harbor boats, supplies and services.	Fuel, harbor boats	$300,516.10	$266,547.45	....	....	....
	Purchase of harbor boats.	....	5,330.00	....	....	....
	Repair of harbor boats.	130,440.36	119,440.88	....	....	....
	Hire and charter of harbor boats.	20,566.00	15,619.00	....	....	....
	Water for harbor boats	7,786.09	9,542.36	....	....	....
	Class D, supplies, harbor boats.	18,150.15	6,846.07	....	....	....
	Total, harbor boats.	477,460.70	423,325.76	....	$54,134.94	....
Army transport services.	Fuel	243,343.55	282,827.78	....	....	....
	Class A, supplies	130,339.69	153,620.90	....	....	....
	Class D, supplies	5,832.89	10,660.22	....	....	....
	Water, stevedoring, pilotage, etc.	205,110.81	148,857.76	....	....	....
	Repair of transports	396,288.64	182,450.79	....	....	....
	Total, transport service.	980,915.58	778,417.45	....	202,498.13	....
Miscellaneous supplies and services	Advertising	690.93	507.53	....	....	....
	Purchase of draft and pack animals.	250,849.00	141,645.00	....	....	....
	Purchase of railroad equipment.	2,389.54	2,170.48	....	....	....
	Class D, supplies for posts, depots, constructing quartermasters, etc.	11,557.41	74,780.12	....	....	....
	Class IV, services, posts, depots, constructing quartermasters, etc.	12,283.31	16,253.41	....	....	....
	Autos and trucks, purchase of.	28,955.22	....	....	....	....
	Autos and trucks, maintenance..	10,752.39	....	....	....	....
	Mexican border (supplies and services).	....	62,212.08	....	....	....
	Relief of flood sufferers.	....	13,715.87	....	....	....
	Total miscellaneous.	317,477.80	311,279.49	....	6,198.31	....
	Total expenditures, United States.	8,792,321.10	8,617,502.81	....	174,818.29	....
	Apportioned the Philippine Islands for all purposes of the appropriation.	2,035,154.75	2,226,098.04	$190,943.29	....	....
	Total United States and Philippine Islands.	10,827,475.85	10,843,600.85	....	....	$16,125.00
	Amount of the appropriation.	10,850,000.00	11,023,615.06	....	....	....
	Unexpended balance.	22,524.15	180,014.21	....	....	....

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "ROADS, WALKS, WHARVES, AND DRAINAGE."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class I, personal services.	Civilian employees	$1,572.50	$1,800.00			
	Extra duty	4,555.34	5,956.60			
	Total Class I, personal services.	6,127.84	7,756.60	$1,628.76		
Class D, supplies.	Supplies not included in apportionments for Class B and Class III.	2,021.46	5,896.33	3,874.87		
Classes B and III.	Care and improvement of grounds.	40,595.32	29,128.28			
	Drainage repairs	9,163.60	22,702.48			
	Roads, repair of	81,769.43	115,966.87			
	Walks, repair of	23,147.12	21,879.15			
	Wharves, repair of	68,656.25	41,620.00			
	Total Classes B and III.	223,331.72	231,296.78	7,965.06		
New construction and betterments.	Drainage projects	29,162.69	590.00			
	Dreding channels	34,888.00	1,614.00			
	Roads, construction of	253,523.55	53,000.71			
	Walks, construction of	20,245.63	12,137.66			
	Wharves, construction of.	23,029.78	9,839.80			
	Macadamizing road, Vancouver Barracks.	3,568.00				
	Draining swamp, West, Point, N. Y.	28,600.00				
	Filling pond, Fort Taylor, Fla.	49,600.00				
	Road, experimental farm to Arlington, Va.	21,836.17				
	Road, highway bridge to Arlington, Va.	44,000.00				
	Total new construction and betterments.	508,453.82	77,182.17		$431,271.65	
Class IV, services.	Advertising	1,283.45	324.14		959.31	
	Total expenditures, United States.	741,218.29	322,456.02		418,762.27	
	Apportioned the Philippine Islands for all purposes of the appropriation.	148,512.45	118,000.00		30,512.45	
	Total United States and Philippine Islands.	889,730.74	440,456.02			
	Amount of the appropriation.	925,350.00	449,315.79			
	Unexpended balance.	35,619.26	8,859.77			

APPROPRIATION "WATER AND SEWERS AT MILITARY POSTS."

Class A, supplies.	Depots, independent stations and constructin quartermasters.	$9,605.69	$14,471.29			
	Central Division	8,637.73	12,193.84			
	Eastern Division	10,252.48	9,874.45			
	Western Division	7,811.73	7,895.92			
	Total class A, supplies.	36,307.63	44,435.50	$8,127.87		

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "WATER AND SEWERS AT MILITARY POSTS"—Continued.

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class II, services.	Depots, independent stations and constructing quartermasters.	$1,008.50	....	....	....	....
	Central Division......	3,114.60	$3,315.37	....	....	....
	Eastern Division......	2,456.52	2,193.55	....	....	....
	Western Division.....	3,163.55	2,501.48	....	....	....
	Total Class II, services.	9,743.17	8,010.40	....	$1,732.77	....
Class I, personal services.	Civilian employees....	293,004.59	297,571.48	....	....	....
	Extra duty...........	12,313.78	1,477.06	....	....	....
	Total Class I, personal services.	305,318.37	299,048.54	....	6,269.83	....
Class I, non-personal services.	Purchase of water.....	233,124.17	211,522.19	....	....	....
	Garbage, disposal of...	13,609.21	10,631.00	....	....	....
	Total Class I, non-personal services.	246,733.38	222,153.19	....	24,580.19	....
Class IV, services.	Advertising...........	957.87	1,487.19	....	....	....
	Miscellaneous services.	7,568.34	11,373.32	....	....	....
	Total Class IV, services.	8,526.21	12,860.51	$4,324.30	....	....
Classes B and III.	Annualrepairs	52,841.37	72,894.45	20,053.08	....	....
Miscellaneous..	Fuel for pumping plants.	148,971.11	162,630.71	....	....	....
	Fuel for incinerators..	340.50	134.40	....	....	....
	Class D, supplies......	15,937.68	31,000.00	....	....	....
	Sterilizers, incinerators, etc.	6,660.36	13,422.35	....	....	....
	Mexican border (supplies and services)..	....	2,786.59	....	....	....
	Total miscellaneous.	171,909.65	209,974.05	38,064.40	....	....
New construction, betterments, etc.	Fire apparatus, purchase and repair of.	32,302.99	49,455.11	....	....	....
	Garbage crematories, construction of.	6,597.70	12,784.00	....	....	....
	Plumbing in new buildings.	40,354.08	18,806.73	....	....	....
	Repairs to plumbing in buildings.	118,317.20	154,759.75	....	....	....
	Construction of water and sewer systems.	263,549.01	664,024.42	....	....	....
	Total new construccion and betterments.	461,120.98	899,830.01	438,709.03	....	....
	Total expenditures, United States.	1,292,500.76	1,769,206.65	466,695.89	....	$166,695.89
	Amount apportioned Philippine Islands for all purposes of the appropriation.	406,859.98	299,000.00	....	....	....
	Total United States and Philippine Islands.	1,699,360.74	2,068,206.65	....	....	....
	Amount of the appropriation.	1,702,595.00	2,250,903.27	....	....	....
	Unexpended balance.	3,234.26	182,696.62	....	....	....

EXHIBIT 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "CLOTHING AND CAMP AND GARRISON EQUIPAGE."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class A, supplies.	Civilian outer clothing for dishonorably discharged prisoners.	$25,157.61	$20,343.12			
	Packing material, for care, etc., of clothing and equipage.	84,694.87	71,276.90			
	Total class A, supplies.	109,852.48	91,620.02		$18,232.46	
Class I, personal services.	Civilian employees	345,975.41	338,720.65		7,254.76	
Class II	Altering, fitting, washing, etc.	13,575.13	18,600.25	$5,025.12		
Class D, supplies.	Equipage	6,765.57	29,152.47			
	Band instruments, purchase and repair of.	30,252.30	37,421.68			
	Trunk lockers	48,899.15	18,678.95			
	Field desks	5,470.00	785.50			
	Total class D, supplies.	91,387.02	86,038.60		5,348.42	
Class IV, services.	Advertising	9,246.45	9,671.68			
	Miscellaneous	3,525.00	4,180.77			
	Total Class IV, services.	12,771.45	13,852.45	1,081.00		
Contracts	Procurement of materials for manufacture of clothing; purchase of clothing; manufacture of clothing; purchase of equipage.	4,396,938.51	4,377,922.28		19,016.23	
Miscellaneous	Mexican border (supplies and services).		713.34	713.34		
	Total expenditures, United States.	4,970,500.00	4,927,467.59			
	Apportioned Philippine Islands.		26,100.00	26,100.00		
	Total United States and Philippine Islands.	4,970,500.00	4,953,567.59			
	Amount of the appropriation.	5,000,000.00	4,901,271.67			
	Credits due to transfers of clothing and equipage to Organized Militia.		88,819.61			
	Total	5,000,000.00	4,990,901.28			
	Unexpended balance.	29,500.00	36,523.69			

Exhibit 5—Continued.

Detailed expenditures of the Quartermaster's Department for the fiscal year ended June 30, 1913, itemized under different appropriations, as compared with cost for similar purposes, fiscal year 1912—Continued.

APPROPRIATION "MAINTENANCE ARMY WAR COLLEGE."

Class.	Purpose.	Fiscal year 1913.	Fiscal year 1912.	1913 less than 1912.	1913 greater than 1912.	Net reduction.
Class I, personal.	Civilian employees....	$5,700.00	$5,676.00	....	....	....
Class I, nonpersonal.	Light.................	1,800.00	2,226.35	....	....	....
Class A........	Fuel..................	2,700.00	3,992.23	....	....	....
	Total...........	10,200.00	11,894.58	$1,694.58	....	$1,694.58
	Amount of the appropriation.	10,700.00	12,700.00	2,000.00	....	....
	Unexpended balance.	500.00	805.42	....	....	....

Exhibit 6.

Statement of account with the department quartermaster, Philippine Department, Manila, P. I., fiscal year 1913.

Appropriations.	Amounts apportioned.	Funds remitted.	Expended in United States.	Total remitted and expended in United States.
Regular supplies, Quartermaster's Department..................................	$1,323,555.60	$600,163.24	$723,082.82	$1,323,246.06
Equipment of officers' schools at military posts..................................	2,275.00	2,215.00	60.00	2,275.00
Incidental expenses, Quartermaster's Department..................................	286,962.23	282,802.11	4,126.22	286,928.33
Transportation of the Army and its supplies.	2,035,154.75	1,935,448.18	98,954.17	2,034,402.35
Roads, walks, wharves, and drainage.......	148,512.45	146,843.79	1,668.66	148,512.45
Water and sewers at military posts.........	406,859.98	376,488.56	30,371.42	406,859.98
Barracks and quarters, Philippine Islands..	512,577.09	439,262.26	73,206.76	512,469.02
Military post exchanges.....................	10,000.00	10,000.00	....	10,000.00
Construction and repair of hospitals........	60,000.00	60,000.00	....	60,000.00
Quarters for hospital stewards..............	2,000.00	2,000.00	....	2,000.00
Horses for Cavalry, Artillery, Engineers, etc.	2,000.00	2,000.00	....	2,000.00
Shooting galleries and ranges...............	20,608.18	20,608.18	....	20,608.18
Disposition of remains of officers, soldiers, and civil employees......................	14,007.35	12,143.35	1,864.00	14,007.35
Clothing and camp and garrison equipage...	27,956.24	27,956.24	....	27,956.24
Replacing regular supplies, Quartermaster's Department (act Mar. 23, 1910), 1912–13...	33,000.00	30,000.00	2,830.88	32,830.88
Replacing regular supplies, Quartermaster's Department (act Mar. 23, 1910), 1913–14...	3,179.50	....	3,179.50	3,179.50
Replacing incidental expenses, Quartermaster's Department (act Mar. 23, 1910), 1912–13..................................	775.00	327.60	447.40	775.00
Replacing incidental expenses, Quartermaster's Department (act Mar. 23, 1910), 1913–14..................................	479.69	479.69	....	479.69
Replacing transportation of the Army and its supplies (act Mar. 23, 1910), 1912–13....	11,272.33	7,830.95	3,278.35	11,109.30
Replacing transportation of the Army and its supplies (act Mar. 23, 1910), 1913–14....	15,481.56	15,481.56	....	15,481.56

EXHIBIT 7.

Mileage disbursements for the fiscal year ended June 30, 1913.

	Appropriations.		
	1911	1912	1913 and 1913-14
Inspection of the Army—			
By generals commanding departments, accompanied by officers of their staffs, as provided by paragraph 193, Army Regulations		$675.58	$7,669.54
By officers of the General Staff Corps		7.44	1,915.71
By officers of The Adjutant General's Department			204.42
By officers of the Field Artillery			49.70
By officers of the Inspector General's Department		243.51	10,178.10
By officers of the Judge Advocate General's Department			166.62
By officers of the Quartermaster Corps		1,118.35	10,785.76
By officers of the Medical Department		192.94	3,184.54
By officers of the Coast Artillery Corps		49.98	4,430.17
By officers of the Corps of Engineers		11.40	1,128.28
By officers of the Ordnance Department		360.58	6,862.72
By officers of the Signal Corps		10.97	2,321.74
Inspection of—			
Colleges			1,786.57
Horses		9.38	886.92
Militia		40.11	9,876.26
Troops		105.32	1,057.49
Work on fortifications by engineer officers			1,105.87
Total for inspection of the Army		2,825.56	63,610.41
Accompanying the President		54.18	1,407.43
Accompanying the Secretary of War			1,688.41
Acting as judges at first-aid competitions			67.34
Alaskan road commission			632.82
Army schools and colleges		2,104.50	46,215.00
Attending American Medical Association		19.04	428.64
Attending American Historical Society			65.38
Attending American Prison Association			5.60
Attending American Veterinary Medical Association			242.28
Attending American Road Congress			27.16
Attending Association of Military Surgeons			47.54
Attending Catholic Total Abstinence Union of America			45.80
Attending celebration in honor of President-elect Wilson			10.78
Attending Clinical Congress of Surgeons of North America			33.04
Attending Convention of National Guard Association			687.39
Attending commemoration of fiftieth anniversary of Battle of Gettysburg			136.58
Attending French School of Application, Saumur, France			1,008.88
Attending funerals			610.32
Attending international conference for testing of explosives			42.28
Attending international military contest at Madison Square Garden			59.78
Attending International Congress on Tuberculosis		384.45	366.47
Attending inauguration exercises			30.31
Attending Military Riding School, Hanover, Germany			201.69
Attending National Association for Preventing Pollution of Rivers and Waterways			61.18
Attending Olympic games, Stockholm, Sweden		221.16	566.98
Attending School of Tropical Medicines, London, England			16.60
Attending Southern Medical Association			105.70
Attending Transcontinental Conference			39.76
Attending Tri-State Medical Association			28.14
Boards—			
Of Ordnance and Fortifications		38.13	178.08
Of Survey		1.12	17.22
On Cavalry Equipment			367.61
On Cavalry Organization			1,827.96
On Drill Regulations			233.35
On Engineer Organization			77.84
On Examination of Gunners			420.06
On Examination of Officers for Promotion		583.00	15,777.62
On General Staff			177.49
On Land Defenses of Panama Canal			633.98
On Military Posts, Fortifications, and Buildings		71.82	1,177.84
On Retirement of Officers		637.99	5,151.51
On Study of Tropical Diseases			55.54
National Land Defense Board			189.48
American National Red Cross Society			47.74
Changes of station	$147.60	6,897.15	194,499.02
Conducting prisoners, sick and insane		582.97	6,010.34
Conference with representatives of Interior Department in reference to national park affairs			232.31
Consultation with Chief, Coast Artillery Corps			93.18
Consultation with Chief of Ordnance			138.04
Consultation with Chief of Signal Corps			31.93
Consultation with division and department commanders			396.56

EXHIBIT 7—Continued.

Mileage disbursements for the fiscal year ended June 30, 1913—Continued.

	Appropriations.		
	1911	1912	1913 and 1913–14
Courts-martial and courts of inquiry		$829.48	$8,704.00
Expedition to China		586.73	2,535.83
Field exercises, Philippine Islands			599.36
Field service on Mexican border		333.47	2,852.93
Fire control and installation			627.49
Horsemanship or walking tests		16.60	4,239.76
Instructions of Secretary of War (confidential duty)		337.74	9,641.44
Leases and other legal business			189.15
Line officers on business pertaining to Quartermaster Corps		525.35	1,414.93
Maneuvers and camps of instruction, Army and Militia		3,881.10	57,244.65
Military aeronautics		38.43	3,787.69
Military intelligence work			11.20
Military prisons			426.83
Military surveys		129.01	1,451.77
Military tournaments			196.20
Observers of Balkan war			941.71
Panama-Pacific International Exposition			180.04
Payment of troops		249.02	8,691.75
Presentation of medal of honor			75.18
Recruiting Service		5,593.29	74,212.57
Relief of cyclone sufferers in Alabama			57.68
Relief of flood sufferers in Ohio and Mississippi Valleys		1,381.03	4,537.38
Quarantine duty			398.96
Serving with French Army			297.57
Special investigations		10.64	1,448.30
Study of French language			1,563.96
Study of Spanish language			761.00
Target practice	43.02	40.48	6,802.41
Topographical work		150.87	1,615.95
Travel for medical and dental treatment		242.02	8,093.91
Travel in Europe and other foreign countries		1,839.90	11,075.62
Travel of generals and aids, not inspection		24.78	370.64
Treasurer and professors, Military Academy			143.64
Witnessing cadet drill, Washington, D. C			76.44
Witnessing French and German Army maneuvers			1,744.12
Witnessing target practice of Asiatic Fleet			8.68
Witnessing target practice of Atlantic Fleet			139.26
Duty not stated			107.32
Amounts	190.62	30,631.01	562,890.64 30,631.01 190.62
Total Pay Department and Quartermaster Corps disbursements			593,712.27
Paid by Auditor for the War Department on Treasury settlements and chargeable to mileage appropriation	481.37	1,157.30	194.67 1,157.30 481.37
Aggregate, Pay Department, Quartermaster Corps, and Auditor for War Department during fiscal year 1913			595,545.61

EXHIBIT 8.

Statement showing quantities and cost of fuel, except for transports and other vessels, purchased during the fiscal year 1913.

[Does not include that purchased in the Philippines.]

	Quantities.	Regular supplies.	Army transportation.	Water and sewers.	Incidental expenses.
Anthracite coal...pounds..	263,819,182	$690,149.51		$16,440.92	
Bituminous coal...do....	369,423,838	780,500.57	$1,741.64	70,971.46	$4,541.03
Wood...cords..	61,922	383,251.70		24,585.96	
Mineral oil...gallons..	46,801	4,148.08		586.05	7.20
Gasoline...do....	256,703	31,216.82	1,229.75	3,094.36	1.15
Fuel oil...do....	1,583,691	31,513.28		10,144.60	20.27
Distillate...do....	7,840			627.20	
Charcoal...pounds..	159,635	1,145.03			124.93
Coke...do....	230,000	602.72			
Total		1,922,527.71	2,971.39	126,450.55	4,694.58

EXHIBIT 8—Continued.

Statement showing quantities and cost of fuel, except for transports and other vessels, purchased during the fiscal year 1913—Continued.

	Barracks and quarters.	Construction and repair of hospitals.	Roads, walks, wharves, and drainage.	Maintenance Army War College.
Anthracite coal ... pounds..				$2,115.68
Bituminous coal ... do...			$567.23	
Mineral oil ... gallons..	$4.76			
Gasoline ... do...	.80	$2.70	65.00	
Charcoal ... pounds..	27.60			
Total	33.16	2.70	632.23	2,115.68

RECAPITULATION.

Regular supplies	$1,922,527.71
Army transportation	2,971.39
Water and sewers	126,450.55
Incidental expenses	4,694.58
Barracks and quarters	33.16
Construction and repair of hospitals	2.70
Roads, walks, wharves, and drainage	632.23
Maintenance Army War College	2,115.68
Grand total	2,059,428.00

Of the above supplies the following quantities were shipped to Porto Rico:

	Quantities.	Cost.
Anthracite coal ... pounds..	40,000	$191.96
Bituminous coal ... do...	1,242,000	3,283.55
Total		3,475.51

Of the above supplies the following were purchased in Porto Rico, Alaska, and Hawaiian Islands:

Porto Rico:	
Wood, 1,350 cords	$8,847.00
Charcoal, 2,500 pounds	50.00
Mineral oil, 6,000 gallons	780.00
Gasoline, 600 gallons	105.00
Total	9,782.00
Alaska:	
Wood, 1,941 cords	18,315.20
Bituminous coal, 11,618,240 pounds	49,401.61
Total	67,716.81
Hawaiian Islands:	
Bituminous coal, 14,404,800 pounds	47,321.35
Charcoal, 1,600 pounds	32.00
Fuel oil, 62,000 gallons	2,170.90
Mineral oil, 67,664 gallons	10,827.84
Gasoline, 12,641 gallons	3,106.91
Total	63,459.00

EXHIBIT 9.

Quantities and cost of forage and bedding purchased during the fiscal year 1913, except that purchased for the Philippine Islands.

	Pounds.	Cost.	Average cost.
Oats	104,739,934	$1,711,388.16	$1.6339
Hay	144,035,315	1,157,146.73	.80339
Bran	4,133,679	55,558.31	1.344
Corn	1,302,340	16,926.51	1.222
Green fodder	15,510	78.80	.508
Peat moss	8,950	69.38	.7718
Barley	830,034	13,036.86	1.571
Bedding	23,419,681	125,961.62	.5379
Dog food	86,200	6,256.26	7.258
Total	278,571,643	3,086,422.63	
Total forage and bedding purchased (except for the Philippine Islands), exclusive of dog food	278,485,443	3,080,166.37	

Of the above supplies the following were shipped to Porto Rico, Alaska, and the Hawaiian Islands:

	Pounds.	Cost.
PORTO RICO.		
Oats	525,000	$9,161.26
Hay	822,000	8,425.50
Bran	15,000	204.00
Bedding	192,000	1,238.40
Total		19,029.16
ALASKA.		
Oats	335,584	5,428.20
Hay	612,992	5,478.73
Bran	21,000	274.80
Bedding	134,860	674.30
Dog food	86,200	6,256.26
Total		18,112.29
HAWAIIAN ISLANDS.		
Oats	5,850,061	90,236.69
Hay	8,434,886	70,427.12
Bran	253,590	3,361.02
Total		164,024.83

Of the above supplies the following were purchased in the Hawaiian Islands: Bedding, 1,778,400 pounds, valued at $9,436.60.

EXHIBIT 10.

The following quantities of forage were purchased for shipment to the Philippine Islands during the fiscal year 1913:

	Pounds.	Cost.
Oats	23,999,495	$390,998.90
Hay	31,000,000	310,650.00
Total		701,648.90

The following quantities of forage were purchased during the fiscal year 1913 for feeding animals awaiting shipment and en route to the Philippine Islands:

	Pounds.	Cost.
Oats	63,700	1,073.35
Hay	134,000	1,085.65
Bran	65,765	734.90
Total		2,893.90

EXHIBIT 11.

Statement showing the quantities of clothing and equipage and materials purchased and manufactured during the fiscal year ending June 30, 1913, quantities issued to the Army and the Militia, and quantities remaining on hand June 30, 1913.

Article.	Received.			Issued.			On hand at depots June 30, 1913 (including field supply depot stock).
	Purchased.	Manufactured by Quartermaster Corps.	Total.	To the Army.	To the Militia.	Total.	
Aprons, bakers' and butchers'		2,000	2,000	2,058		2,058	878
Belts, waist				61,830	6,921	68,751	11,010
Boots, rubber, half hips			100	717		717	860
Breeches:							
Cotton, olive drab		15,000	15,000	171,679	64,887	236,566	592,198
Woolen, olive drab		115,000	115,000	118,245	23,758	142,003	343,261
Caps:							
Canvas, blanket-lined				68		68	934
Cooks and bakers		1,000	1,000	1,144		1,144	954
Dress	5,000		5,000	37,025	3,559	40,584	30,868
Service, wool, olive drab	113,000		113,000	87,890	12,011	99,901	42,784
White duck				186		186	1,468
Winter		28,000	28,000	19,936		19,936	19,430
Coats:							
Working		44,800	44,800	67,623	1,497	69,120	86,261
Dress		24,800	24,800	20,272	1,926	22,198	47,070
Service—							
Cotton, olive drab				117,769	43,399	161,168	204,311
Woolen, olive drab		45,000	45,000	86,386	15,884	102,270	97,948
White, Hospital Corps, cooks and bakers		5,000	5,000	6,959	12	6,971	7,661
Collars	403,491		403,491	386,729	2,000	388,729	129,795
Cords:							
Hat	214,624		214,624	152,987	42,090	195,077	147,070
Breast	9,500		9,500	23,221	2,833	26,054	32,552
Drawers:							
Summer	587,110		587,110	565,553		565,553	109,926
Winter	62,500		62,500	201,602		201,602	85,081
Gauntlets:							
Leather (buckskin) ... pairs	27,000		27,000	32,370	2,877	35,247	13,087
Winter ... do				7,607		7,607	9,299
Gloves:							
Buckskin ... do				2,154		2,154	4,512
Yellow horsehide ... do	7,650		7,650	12,634	216	12,850	4,886
Cotton, white ... do	255,000		255,000	222,607	3,048	225,655	306,515
Woolen, olive drab ... do	156,500		156,500	108,699	1,761	110,460	145,727
Hats:							
Blue denim		15,000	15,000	18,210	1,525	19,735	14,985
Oiled				293		293	926
Service	100,059		100,059	101,100	32,713	133,813	104,568
Jackets, oilskin				270		270	624
Leggings, canvas ... pairs	46,915		46,915	235,635	39,769	275,404	67,818
Overcoats:							
Olive drab	25,023	2,500	27,523	44,690	11,878	56,568	65,046
Canvas, blanket-lined				250		250	8,288
Overshoes, arctic ... pairs	2,200		2,200	14,860		14,860	13,490
Ponchos		94,600	94,600	42,055	21,360	63,415	38,290
Shirts, flannel, olive drab		135,000	135,600	233,251	44,078	277,329	150,904
Shoes:							
Gymnasium ... pairs	10,000		10,000	21,025		21,025	19,545
All other kinds ... do	327,536		327,536	272,338	32,808	305,146	110,280

EXHIBIT 11—Continued.

Statement showing the quantities of clothing and equipage and materials purchased and manufactured during the fiscal year ending June 30, 1913, quantities issued to the Army and the Militia, and quantities remaining on hand June 30, 1913—Continued.

Article.	Received.			Issued.			On hand at depots June 30, 1913 (including field supply depot stock).
	Purchased.	Manufactured by Quartermaster Corps.	Total.	To the Army.	To the Militia.	Total.	
Slickers	....	22,000	22,000	17,227	4,031	21,258	3,300
Stockings:							
Cotton ... pairs	861,000	....	861,000	767,537	1,098	768,635	68,455
Wool, heavy weight ... do	57,500	....	57,500	71,822	1,820	73,642	57,313
Wool, light weight ... do	1,312,500	....	1,312,500	860,057	16,600	876,657	125,323
Suspenders	4,000	....	4,000	19,711	....	19,711	14,737
Sweaters	50,186	....	50,186	59,677	450	60,127	129,924
Tags, identification	303,250	....	303,250	88,882	108,613	197,495	251,693
Trousers:							
Dress, 22-ounce	....	....	....	2,525	....	2,525	8,351
Dress, 16-ounce	....	34,000	34,000	28,437	3,044	31,481	71,779
Working	....	45,360	45,360	84,877	1,661	86,538	12,587
White, Hospital Corps, cooks and bakers	....	16,000	16,000	12,202	12	12,214	13,856
Undershirts:							
Winter	55,000	....	55,000	152,927	....	152,927	45,458
Summer	696,276	....	696,276	496,367	10	496,377	128,170
EQUIPAGE.							
Arresters, spark	....	....	....	560	....	560	469
Axes	....	....	....	3,677	588	4,265	6,063
Bags:							
Barrack	....	15,040	15,040	20,634	559	21,193	13,542
Recruit, clothing	....	16,000	16,000	1,002	....	1,002	18,638
Surplus kit	....	10,000	10,000	3,784	1,547	5,331	18,262
Bars, mosquito:							
Single	30,000	....	30,000	48,570	669	49,239	23,996
Double	....	....	....	98	200	298	4,679
Basins, canvas	....	3,000	3,000	1,248	....	1,248	2,585
Bedsteads, iron:							
Double	....	....	....	46	....	46	1,264
Single	2,000	....	2,000	6,555	....	6,555	317
Bedstead castors	51,000	....	51,000	57,103	....	57,103	6,301
Blankets, woolen:							
Heavy weight, olive drab	....	....	....	3,195	446	3,661	12
Light weight, olive drab	100,900	....	100,900	56,592	18,273	74,865	146,664
Blue, light weight	....	....	....	12,047	....	12,047	7,840
Brassards	....	....	....	536	....	536	3,339
Brooms, corn	65,012	....	65,012	99,160	332	99,492	30,263
Brushes, scrubbing	62,500	....	62,500	71,515	176	71,691	63,934
Buckets, canvas	....	3,000	3,000	1,295	....	1,295	2,989
Bugles (and trumpets)	1,500	....	1,500	1,456	798	2,254	610
Cases:							
Color	....	200	200	162	12	174	133
Guidon	....	600	600	284	4	288	358
Pillow	60,861	....	60,861	74,145	....	74,145	58,816
Standard	....	110	110	26	....	26	165
Telescope	2,000	....	2,000	869	....	869	5,081
Chairs, barrack	10,000	....	10,000	8,569	200	8,769	12,475
Colors:							
Camp	....	....	....	171	68	239	467
Coast Artillery Corps	....	11	11	6	1	7	13
Batallion of Engineers	....	2	2	1	....	1	1
Infantry, regimental	....	26	26	8	5	13	16
National:							
Service	....	44	44	34	28	62	24
Silk	....	35	35	38	11	49	15
Cords and tassels:							
Color, silk	....	....	....	69	1	70	130
Trumpet	....	....	....	1,147	506	1,653	2,183
Cots	42,630	....	42,630	26,858	3,538	30,396	3,605
Covers:							
Cot	....	25,000	25,000	21,738	150	21,888	20,653
Mattress	16,000	....	16,000	14,100	3	14,103	3,578
Desks, field:							
Brigade and division headquarters	....	....	....	6	....	6	20
Company and regimental headquarters	1,000	....	1,000	658	49	707	901

EXHIBIT 11—Continued.

Statement showing the quantities of clothing and equipage and materials purchased and manufactured during the fiscal year ending June 30, 1913, quantities issued to the Army and the Militia, and quantities remaining on hand June 30, 1913—Continued.

Article.	Received.			Issued.			On hand at depots June 30, 1913 (including field supply depot stock).
	Purchased.	Manufactured by Quartermaster Corps.	Total.	To the Army.	To the Militia.	Total.	
EQUIPAGE—continued.							
Flags:							
Advertising		1,000	1,000	430		430	1,007
Garrison		8	8	35		35	329
Post		192	192	337	74	411	586
Recruiting		800	800	459		459	491
Storm		1,000	1,000	648	236	884	3,01
Flies, tent:							
Hospital, regulation		1,000	1,000	645	276	921	400
Hospital, tropical				309		309	222
Pyramidal, small		2,000	2,000				1,989
Storage				233	52	285	811
Wall, regulation				1,657	825	2,482	1,612
Wall, tropical				940	25	965	982
Guidons:							
Ambulance, including staff		300	300	154	80	234	321
Cavalry—							
Service		162	162	131	8	139	204
Silk		62	62	55	5	60	6
Engineers—							
Service				5		5	10
Silk		3	3				
Field Artillery—							
Service		46	46	39	13	52	39
Silk		28	28	16	12	28	1
Signal Corps—							
Service		6	6	1		1	
Silk		2	2				
Handles:							
Shovel, long	250		250	892		892	261
Shovel, short	700		700	1,218		1,218	374
Spade	200		200	281		281	79
Hatchets	6,000		6,000	3,593	323	3,916	9,100
Headnets, mosquito	11,268		11,268	24,800	320	25,120	146,346
Helves:							
Ax	10,500		10,500	10,690	1,251	11,941	10,948
Hatchet	4,400		4,400	6,453	574	7,027	7,167
Pickax	2,000		2,000	7,537	404	7,941	5,739
Lockers, trunk	13,000		13,000	10,047	8	10,055	1,765
Mattresses	3,000		3,000	12,546	3	12,549	8,014
Pickaxes				2,732	315	3,047	7,196
Pillows	25,000		25,000	13,495	3	13,498	29,089
Pins, tent:							
Large	190,000		190,000	508,562	141,152	649,714	360,532
Small	730,000		730,000	886,421	182,633	1,069,054	434,769
Shelter				306,327	43,785	350,112	446,231
Plates, stencil				21	90	111	514
Poles, tent:							
Common—							
Ridge				4,482	211	4,693	30,475
Upright				8,943	422	9,365	49,534
Conical wall or pyramidal	2,600		2,600	8,713	1,738	10,451	4,791
Hospital, regulation—							
Ridge				920	291	1,211	2,624
Upright	1,200		1,200	1,889	602	2,491	7,573
Hospital, tropical—							
Ridge				187		187	1,357
Upright				375		375	2,712
Small				726		726	7,095
Shelter	20,000		20,000	28,650	11,302	39,952	6,635
Storage—							
Ridge				204	34	238	1,469
Upright				504	93	597	4,501
Small				1,368	245	1,613	2,033
Wall—							
Regulation—							
Ridge				1,193	879	2,072	798
Upright				2,564	1,758	4,322	2,676
Tropical—							
Ridge				963		963	1,261
Upright				1,704	25	1,729	2,426

EXHIBIT 11—Continued.

Statement showing the quantities of clothing and equipage and materials purchased and manufactured during the fiscal year ending June 30, 1913, quantities issued to the Army and the Militia, and quantities remaining on hand June 30, 1913—Continued.

Article.	Received.			Issued.			On hand at depots June 30, 1913 (including field supply depots stock).
	Purchased.	Manufactured by Quartermaster Corps.	Total.	To the Army.	To the Militia.	Total.	
EQUIPAGE—continued.							
Pouches, music:							
Large				250		250	373
Small				234		234	647
Receivers, card, for bedsteads	16,000		16,000	21,188		21,188	21,435
Rolls:							
Bedding		3,500	3,500	1,434	3	1,437	1,510
Clothing		2,300	2,300	849	113	962	1,402
Sacks:							
Bed	10,000		10,000	21,289	4,357	25,646	9,467
Pillow				2,132		2,132	8,864
Sheets, bed	70,000		70,000	96,585		96,585	39,955
Shovels:							
Long-handled				2,826	49	2,875	5,217
Short-handled				3,301	452	3,753	4,119
Slings:							
Bugle	200		200	200	195	395	546
Color				47	8	55	87
Spades				2,868	238	3,106	6,060
Stamps, company marking	270		270	201	22	223	278
Stands, music	1,000		1,000	261	48	309	1,529
Standards:							
National—							
Service		30	30	15	1	16	21
Silk		10	10	16		16	6
Regimental—							
Cavalry		5	5	3		3	10
Field Artillery		3	3	1		1	
Stoves, tent				1,908	360	2,268	25,093
Stovepipe:							
Elbows	3,200		3,200	2,284	66	2,350	3,258
Joints	10,750		10,750	14,265	1,155	15,420	209,781
Stretchers, shoe				265	175	440	1,878
Tents:							
Common				3,340	111	3,451	2,507
Conical wall				355	9	364	28
Hospital—							
Regulation				934	179	1,113	284
Tropical				328		328	385
Pyramidal—							
Large		6,100	6,100	8,414	1,803	10,217	4,467
Small		2,000	2,000				2,010
Shelter halves—							
Dismounted		68,000	68,000	38,436	9,839	48,275	45,825
Mounted				22,976	1,353	24,329	10,516
Storage				271	31	302	677
Wall—							
Regulation				1,126	638	1,764	776
Tropical				813	25	838	312
Tripods, tent	4,001		4,001	6,605	1,825	8,430	4,591
Whistles and chains	21,021		21,021	11,303	5,132	16,435	25,378

Materials.	Purchased.	Issued and used, etc.	On hand June 30, 1913.
Braid, cord edge ... yards	32,500	102,192	84,110
Buttons:			
Coat, bronze, large	72,000	422,856	108,766
Coat, bronze, small	1,440,000	2,415,647	883,022
Coat, gilt, large	120,960	179,849	38,163
Coat, gilt, small	180,000	229,024	33,425
Olive-drab shirt	914,400	1,094,532	43,068
Overcoat, bronze	720,000	1,719,217	30,003
Cloth:			
Cotton uniform, bleached ... yards		6,021	2,365
Dark-blue, coat, 17-ounce ... do		48,224	20,204
Facing (all kinds) ... do	1,835	3,415	14,943
Italian, black ... do	35,000	12,117	23,483

EXHIBIT 11—Continued.

Statement showing the quantities of clothing and equipage and materials purchased and manufactured during the fiscal year ending June 30, 1913, quantities issued to the Army and the Militia, and quantities remaining on hand June 30, 1913—Continued.

Materials.	Purchased.	Issued and used, etc.	On hand June 30, 1913.
Cloth—Continued.			
Olive-drab cotton, 6½-ounce . . . yards	4,888	1,165,132	334,387
Waterproofed, 35-inch . . . do	200,000	196,733	....
Waterproofed, 41-inch . . . do	2,616	306,223	18,977
Denim, blue . . . do	364,267	505,023	....
Drilling, olive-drab, 33-inch . . . do	63,134	105,075	199,412
Drilling, unbleached . . . do	36,000	298,569	6,731
Duck:			
Khaki, 7½ to 8 ounce . . . do	....	78,771	3,423
Khaki, 8-ounce, 28½-inch . . . do	128,120	125,748	8,849
Khaki, 10½-ounce, 29½-inch . . . do	....	22,852	6,583
Khaki, 12.4-ounce, 29½-inch . . . do	525,392	782,882	69,134
Khaki, 23-ounce, 40-inch . . . do	3,363	4,441	3,537
Olive drab, No. 4, 42-inch . . . do	20,000	4,109	20,199
Olive drab, No. 8 34-inch . . . do	....	57,249	18,252
White, bleached, 6½ to 7 ounce . . . do	100,027	79,629	31,062
Shelter tent, olive-drab . . . do	370,272	298,788	....
Flannel shirting, olive-drab . . . do	300,192	393,914	186,816
Jeans, corset . . . do	30,357	40,598	3,486
Kersey:			
Olive-drab, 16-ounce . . . do	....	71,059	105
Olive-drab, 22-ounce . . . do	....	135,565	232
Light-blue, 16-ounce . . . do	....	49,879	39,019
Light-blue, 22-ounce . . . do	....	232	66,253
Melton, olive-drab:			
13½-ounce . . . do	100,009	109,279	73,283
16½-ounce . . . do	400,995	228,643	225,382
22½-ounce . . . do	302,064	171,385	182,041
Padding:			
Black . . . do	101,176	39,791	66,616
Canvas . . . do	5,220	49,979	....
Serge, luster wool:			
Heavy . . . do	250,316	29,606	188,830
Light . . . do	45,175	942	5,826
Silesia:			
Black . . . do	....	277	15,737
Olive-drab . . . do	110,241	3,631	24,925

EXHIBIT 12.

Statement showing the number and cost of miscellaneous supplies purchased.

UNITED STATES.

	Number.	Total cost.	Average cost.
Outfits, laundry	None.	....	....
Outfits, cooking	7	$329.00	$47.00
Ranges, Army, No. 3	150	4,290.00	28.60
Ranges, Army, No. 3A	100	2,790.00	27.90
Ranges, Army, No. 5	None.	....	....
Ranges, field	2	44.80	22.40
Stoves, cooking	16	162.00	10.12
Stoves, oil	40	126.40	3.16
Stoves, heating, miscellaneous	419	4,370.10	10.43
Safes, office	None.	....	....
Safes, paymasters' field	None.	....	....
Lamps, street	2	36.25	17.62
Lamps, pendant	None.	....	....
Lamps, bracket	None.	....	....
Paulins, large	1,564	47,465.91	30.34
Paulins, small	None.	....	....
Typewriters	89	5,894.00	66.22
Coffins	129	1,991.00	15.43
Incinerators	1	130.00	130.00
Sterilizers	None.	....	....

EXHIBIT 12—Continued.

Statement showing the number and cost of miscellaneous supplies purchased—Continued.

PHILIPPINE ISLANDS.

	Number.	Total cost.	Average cost.
Lamps, street	600	$1,590.00	$2.65
Ranges, field, No. 1	47	1,211.19	25.77
Ranges, field, No. 2	16	230.88	14.43

ALASKA.

Ranges, Army, No. 3	5	$188.35	$37.67
Ranges, Army, No. 3A	2	60.44	30.22
Ranges, Army, No. 5	4	216.80	54.20
Ranges, field, No. 2	2	44.80	22.40
Stoves, oil	4	9.80	2.45
Stoves, heating, miscellaneous	78	686.93	9.28
Lamps, pendant	175	543.75	3.10
Lamps, bracket	75	206.25	2.75
Paulins, large	2	64.50	32.25
Paulins, small	4	51.80	12.95
Typewriters	4	194.00	48.50

PORTO RICO.

Paulins, large	3	$96.75	$32.25

MILITIA.

Ranges, field, No. 1	94	$2,422.38	$25.77
Ranges, field, No. 2	17	245.31	14.43
Bakery, field, unit	1	661.82	661.82
Paulins, large	28	903.00	32.25
Typewriters	2	160.00	80.00
Incinerators	1	385.00	385.00

EXHIBIT 13.

Appropriations and expenditures for construction, repairs, rentals, etc., in fiscal year 1913.

Appropriations.	Available July 1, 1912.	Apportioned in fiscal year 1913.						Unapportioned balance June 30, 1913.
		New construction, etc.	Repairs, alterations, etc.	Employees, rents, services, etc.	Supplies, equipment, etc.	Philippine Islands.	Total.	
Barracks and quarters	$1,700,000.00	$366,651.27	$627,891.87	$591,315.42	$80,166.63		$1,666,025.19	$33,974.81
Construction and repair of hospitals	450,000.00	232,601.14	152,572.03	503.84		$60,000.00	445,677.01	4,322.99
Quarters for hospital stewards	10,000.00		7,931.31			2,000.00	9,931.31	68.69
Military post exchanges	40,000.00	472.98	18,205.38	7,754.56	3,556.31	10,000.00	39,989.23	10.77
Shooting galleries and ranges	93,336.00	[1] 37,809.01	29,384.62	2,483.28		20,608.18	90,285.09	3,050.91
Military posts	40,379.69	[2] (3,786.74)					[2] (3,786.74)	[3] 44,166.43
Barracks and quarters, seacoast defense	46,842.73	[4] 44,545.51					44,545.51	[3] 2,297.22
Roads, walks, wharves, and drainage	925,350.00	549,040.14	182,736.40	5,838.79	2,021.46	148,500.00	888,136.79	37,213.21
Water and sewers at military posts	1,702,595.00	318,060.06	182,759.68	562,711.92	228,919.26	370,670.00	1,663,120.92	39,474.08
Regular supplies	808,051.90	242,155.85	112,092.34	434,923.01	18,880.70	(5)	808,051.90	
Incidental expenses	6,254.16	1,154.70	5,099.46			(5)	6,254.16	
Transportation of the Army	2,014.54		1,863.54		151.00		2,014.54	
Military prison, Fort Leavenworth, Kans	168,832.18	39,672.18					39,672.18	[3] 129,160.00
Army supply depot, Fort Mason, Cal	9,110.13	8,765.22					8,765.22	[3] 344.91
Additional land, Fort Benjamin Harrison	3,672.64	[6] 1,950.00					1,950.00	[3] 1,722.64
Nebraska rifle range	25,000.00	[6] 24,000.00					24,000.00	[3] 1,000.00
Water supply, Presidio, San Francisco	100,000.00			662.50			662.50	[3] 99,337.50
Additional land, Fort Sam Houston	70,000.00	[6] 70,000.00					70,000.00	
Water system, Scofield Barracks, Hawaii	175,000.00	110,400.00					110,400.00	[3] 64,600.00
Reimbursement to District of Columbia for site acquired for a reformatory	33,000.00	[6] 33,000.00					33,000.00	
Rents in District of Columbia	49,587.00			47,107.65			47,107.65	2,479.35
Barracks and quarters, Philippine Islands	500,000.00	473,470.68					473,470.68	[3] 26,529.32
Army storehouses, Corregidor, P. I	[7] 47,240.05							
Seacoast defenses, Philippine Islands and Hawaii	273,752.78	255,043.11					255,043.11	[3] 18,709.67
Military post exchanges, 1913 and 1914	1,300.00	1,238.00					1,238.00	62.00
Total	7,281,318.80	2,906,243.11	1,320,536.63	1,653,300.97	333,695.36	611,778.18	6,725,554.25	508,524.50

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[1] Includes $3,200 for purchase of land.
[2] Net savings under "Military posts."
[3] Available for expenditure after June 30, 1913.
[4] Including amount charged to adjust previous balances.
[5] Amount for Philippines not yet reported.
[6] For purchase of land.
[7] Appropriation transferred to Engineer Department.

EXHIBIT 14.

Buildings constructed or in course of construction in the United States, Alaska, and the Hawaiian Islands from funds of the fiscal year ended June 30, 1913, from the appropriations "Barracks and quarters" (B. & Q.), "Barracks and quarters, seacoast defense" (B. & Q., S. C. D.), "Military posts" (M. P.), "Seacoast defenses, Philippine Islands and Hawaii" (S. C. D., P. I. & H.), "Construction and repair of hospitals" (C. & R. of H.), "Quarters for hospital stewards" (Q. H. S.), "Regular supplies" (R. S.), and from special appropriations for construction.

[The plumbing, heating, and lighting in buildings constructed from the appropriations for "Barracks and quarters, seacoast defense," "Military posts," "Seacoast defenses, Philippine Islands and Hawaii," and from special appropriations, are defrayed from the same appropriations as the construction proper. The plumbing and electric wiring in new hospitals and hospital stewards' quarters are paid for from the same appropriation as the construction proper, while the heating and electric fixtures in these buildings are paid for from the appropriation for "Regular supplies." For all other buildings the cost of plumbing is defrayed from the appropriation for "Water and sewers," and the heating and lighting apparatus from the "Regular supplies" appropriation.]

Posts and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 31, 1913.
		Building.		Fixtures.					
		Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
Alaska:									
Relief cabins, dog kennels, etc., on military telegraph lines.	Log	B. & Q.	$7,284.68				$7,284.68	$7,284.68	Completed.
Army and Navy General Hospital, Hot Springs, Nurse Corps dormitory.	Brick	C. & R. of H.	16,042.00	$2,550.00	$1,350.00	[1] $636.00 [2] 352.00	20,930.00	20,930.00	Commenced June, 1913.
Armstrong, Fort, Hawaii:									
Quartermaster corral and depot.	Frame	B. & Q.	2,806.14				2,806.14	2,806.14	Completed.
Bliss, Fort, Tex.:									
9 temporary stables	do	do	2,138.20				2,138.20		Do.
8 temporary cavalry barracks	do	do	15,200.00				15,200.00		Do.
Temporary shelter for wagon master, teamster, etc.	do	do	476.00				476.00		Do.
Addition to veterinary hospital	do	do	4,000.00				4,000.00		Do.
Temporary shelter for animals, First Battalion, Eighteenth Infantry.	do	do	256.48				256.48		Do.
Bathhouse and closets for two squadrons, Second Cavalry.	do	do	1,100.00	1,934.00			3,034.00		Do.
Temporary shelter for 30 animals.	do	do	250.00				250.00		Do.
Hospital ward wing	Brick	C. & R. of H.	11,798.00	2,900.00	3,100.00	[1] 255.00 [2] 150.00	18,203.00		Commenced June, 1913.
Isolation ward	do	do	14,920.00	3,950.00	2,400.00	[1] 634.00 [2] 268.00	22,172.00	65,729.68	Do.

[1] Wiring.

[2] Fixtures.

EXHIBIT 14—Continued.

Buildings constructed or in course of construction in the United States, Alaska, and the Hawaiian Islands from funds of the fiscal year ended June 30, 1913, etc.—Continued.

Posts and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 31, 1913.
		Building.		Fixtures.					
		Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
Caswell, Fort, N. C.:									
Addition to fire house	Frame	B. & Q., S. C. D.	$596.75				$596.75		Completed.
Bakery	Brick	R. S.	6,413.50	$600.00	$800.00	$150.00	7,963.50		Commenced June, 1913.
Addition to boathouse	Frame	R. W. W. & D.	2,885.00				2,885.00	$11,445.25	Do.
Constitution, Fort, N. H.:									
Woodshed	do	B. & Q.	205.22				205.22		Completed.
Wagon shed	do	B. & Q., S. C. D.	980.13				980.13	1,185.35	Do.
D. A. Russell, Fort, Wyo.:									
Remodeling of bakery	Brick	R. S.	3,629.00	325.00	935.00		4,889.00	4,889.00	Expires Sept. 4, 1913.
Fremont, Fort, S. C.:									
Shelter for guns (labor)	Frame	B. & Q., S. C. D.	290.50				290.50	290.50	Completed.
Front Royal Remount Depot, Va.:									
Freight storehouse	Hollow tile	B. & Q.	7,150.00				7,150.00		Do.
Veterinary dip	do	do	2,651.65				2,651.65		Do.
4 sheds for colts	Frame	do	2,140.89				2,140.89		Do.
Field repair shop	do	do	216.75				216.75		Do.
Colt stable	Hollow tile	do	13,730.50	750.00			14,480.50	26,639.79	Nearly completed.
Hancock, Fort, N. J.:									
Addition to bakery	Brick	R. S.	3,868.00	500.00	175.00	200.00	4,743.00	4,743.00	Do.
Huachuca, Fort, Ariz.:									
Completing 2 captains' quarters	Stucco	B. & Q.	600.00				600.00		Completed.
3 houses for noncommissioned officers, etc.	Frame	do	300.00				300.00		Do.
4 double officers' quarters	Stucco	do	37,288.00	7,164.00		1,440.00	45,892.00		Commenced June, 1913.
2 troop barracks	do	do	24,980.00	776.00		780.00	26,536.00		Do.
1 double lavatory	do	do	4,663.00	2,766.00	300.00	79.00	7,808.00		Do.
Addition to commissary storehouse.	Concrete and stucco.	do	13,575.00	347.00		165.00	14,087.00		Do.
Addition to hospital	Frame	C. & R. of H.	12,392.00	2,909.00	2,266.00	[1] 311.00	17,878.00	113,101.00	Do.
Jay, Fort, N. Y.:									
Addition to Quartermaster's stable and wagon shed.	do	B. & Q.	562.07				562.07	562.07	Completed.
Kamehameha, Fort, Hawaii:									
Storehouse for reserve subsistence stores for Honolulu depot.	Galvanized iron	do	5,000.00				5,000.00	5,000.00	Do.

Leavenworth, Fort, Military Prison, Kans.:									
Material and labor for continuing construction of prison.	Brick	M. P., Fort Leavenworth.	39,672.18				39,672.18	39,672.18	Partially completed.
Letterman General Hospital, Cal.:									
Completion of kitchen building		C. & R. of H	5,979.66				5,979.66		Completed.
Temporary shelter for disinfecting and sterilizing plant.	Frame	do	4,000.00				4,000.00		Commenced June, 1913.
Disinfecting building	Concrete	do	16,400.00	3,227.00	444.00		20,071.00		Do.
Addition to detention ward	do	do	13,694.00	1,965.00	411.00	[3] 385.00 [1] 159.00	16,614.00		Do.
Nurses' dormitory	do	do	17,672.00	1,810.00	828.00	[3] 518.00 [1] 215.00	21,043.00		Do.
Hydrotherapeutic ward	Concrete	do	13,100.00	5,969.00	553.00	[3] 390.00 [1] 165.00	20,177.00	87,884.66	Do.
McDowell, Fort, recruit depot, Cal.:									
Completing mess hall and central heating plant.		M. P.	5,000.00				5,000.00		Completed.
Completion of hospital		C. & R. of H	6,155.00				6,155.00	11,155.00	Do.
Madison Barracks, N. Y.:									
Teamsters' quarters	Frame	B. & Q	165.80				165.80	165.80	Do.
Mason, Fort, Supply Depot, Cal.:									
Converting building 29 into barrack for detachment.		B. & Q	875.94	308.83		108.00	1,292.77	1,292.77	Do.
Mexican border:									
Shower baths, kitchens, and latrines for Ninth Cavalry.	Frame	do	1,250.00	750.00			2,000.00		Do.
Temporary shelter for troops of Second Division.	do	do	10,000.00				10,000.00		Do.
Temporary stables at Galveston.	do	do	7,000.00				7,000.00	19,000.00	Do.
Morgan, Fort, Ala.:									
Addition to hospital storehouse	do	C. & R. of H	626.00				626.00	626.00	Do.
Moultrie, Fort, S. C.:									
Kitchen addition to band barracks.	do	B. & Q., S. C. D	1,300.00				1,300.00	1,300.00	Do.
Oglethorpe, Fort, Ga.:									
Isolation hospital	Brick	C. & R. of H	16,686.00	2,500.00	2,400.00	[2] 340.00 [3] 280.00	22,206.00		Commenced June, 1913.
Extension of band stable guard building.	Frame	B. & Q	260.00				260.00		Completed.
Converting gas building into double noncommissioned officers' quarters.		do	1,076.00	395.70	238.17		1,709.87	24,175.87	Nearly completed.
Panama Canal Zone:									
Building for medical department.		C. & R. of H	250.00				250.00		Completed.
Extension of quartermaster's clothing storehouse.		B. & Q	1,104.00				1,104.00	1,354.00	Do.

[1] Wiring only.

[2] Wiring.

[3] Fixtures.

EXHIBIT 14—Continued.

Buildings constructed or in course of construction in the United States, Alaska, and the Hawaiian Islands from funds of the fiscal year ended June 30, 1913, etc.—Continued.

Posts and buildings.	Material.	Division of cost.					Total cost for each building or buildings.	Total cost for each post.	Status of work on July 31, 1913.
		Building.		Fixtures.					
		Appropriation.	Cost.	Plumbing.	Heating.	Lighting.			
Riley, Fort, Kans.:									
Addition to bakery	Stone	R. S	$6,367.45	$889.65	$663.65	$161.25	$8,082.00		Nearly completed.
Storage shed, mule shed, and 2 rigging sheds for pack train.	Frame	B. & Q	9,553.00				9,553.00	$17,635.00	Commenced May, 1913.
Robinson, Fort, Nebr.:									
Converting field officers' quarters No. 26 into band barrack.		do	252.45	760.00			1,012.45	1,012.45	Completed.
Ruger, Fort, Hawaii:									
Wagon shed (material)	Frame	do	133.89				133.89		Do.
Combined ordnance and artillery engineer storehouse.		S. C. D., P. I. & H.	4,000.00				4,000.00	4,133.89	Do.
Sam Houston, Fort, Tex.:									
Material for ambulance shed	Frame	B. & Q	161.89				161.89		Do.
Addition to branch post exchange for reading room.		M. P. E	472.98				472.98		Do.
Payment of indebtedness on chapel building.		M. P. E., 1913 and 1914.	1,238.00				1,238.00		
Telephone exchange building	Brick	B. & Q	1,723.00	168.00		93.00	1,984.00	3,856.87	Do.
Schofield Barracks, Hawaii:									
Continuing construction of officers' quarters in Infantry post.	Concrete	do	155,270.82	21,536.49		17,450.00	194,257.31		Partially completed.
Continuing construction of Cavalry post (under contract pending further appropriation by Congress).	do	Cavalry post, Hawaii.	100,000.00				100,000.00		Do.
Additional set of Hospital Corps sergeants' quarters.	Frame	Q. H. S	679.23				679.23		Completed.
Completing laundry building		R. S	7,800.00	648.54			8,448.54		Nearly completed.
School building (material)	Frame	B. & Q	856.22				856.22		Completed.
Temporary administration building for Infantry headquarters.	do	do	365.00				365.00		Do.
Temporary cantonment (material).	do	do	12,183.61	2,000.00			14,183.61	318,789.91	Do.
Shafter, Fort, Hawaii:									
Alterations in new hospital		C. & R. of H	3,493.10				3,493.10		Partially completed.
Kitchen addition to same	Frame	do	3,700.00				3,700.00	7,193.10	Do.

Sheridan, Fort, Ill.:									
Quartermaster Corps barracks..	Brick............	B. & Q............	13,251.00	1,539.00	2,100.00	500.00	17,390.00	17,390.00	Commenced June, 1913.
Sill, Fort, Okla.:									
Remodeling hospital in old post.	....	C. & R. of H......	19,510.94	....	[1] 5,340.00	....	24,850.94	24,850.94	Completed.
Stevens, Fort, Oreg.:									
Bakery........................	Brick............	R. S...............	10,064.00	638.00	758.00	253.00	11,713.00	11,713.00	Commenced May, 1913.
Taylor, Fort, Fla.:									
Boathouse.....................	....	R. W. W. & D....	1,442.00	....	....	....	1,442.00	1,442.00	Completed.
Totten, Fort, N. Y.:									
Reconstruction of quartermaster's stable.	Brick............	B. & Q., S. C. D...	5,472.00	50.00	....	125.00	5,647.00	....	Commenced May, 1913.
Isolation hospital.............	.....do............	C. & R. of H......	17,075.00	[1] 2,900.00	2,600.00	[2] 300.00	22,875.00	28,522.00	Commenced June, 1913.
Travis, Fort, Tex.:									
Alterations in detachment barracks.	....	B. & Q., S. C. D...	500.00	....	....	....	500.00	500.00	Completed.
Walter Reed General Hospital, D. C.:									
Hydrotherapeutic apparatus....	....	C. & R. of H......	7,246.00	....	....	....	7,246.00	....	Commenced June, 1913.
Additional ward................	Brick............	.....do............	18,470.00	1,158.00	1,384.00	[1] 325.00 [2] 112.00	21,449.00	28,695.00	Do.
Washington Barracks, D. C.:									
Addition to bakery............	.....do............	R. S...............	7,433.84	500.00	488.00	140.00	8,461.84	8,461.84	Commenced April, 1913.
West Point, N. Y.:									
Oil house......................	.....do............	B. & Q............	1,992.92	....	....	....	1,992.92	....	Completed.
Wagon shed....................	Frame............	.....do............	2,995.00	....	....	....	2,995.00	4,987.92	Do.
Winfield Scott, Fort, Cal.:									
Ambulance and stable shed.....	.....do............	B. & Q., S. C. D...	943.93	....	....	....	943.93	943.93	Do.
Yosemite, Camp, Cal.:									
Fire apparatus house..........	.....do............	B. & Q............	119.18	....	....	....	119.18	119.18	Do.

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[1] Including wiring.

Fixtures.

[2] Wiring.

EXHIBIT 15.

Revocable licenses, permits, etc., granted by the War Department during the fiscal year 1913 (so far as shown by Office, Chief, Quartermaster Corps, records).

Fort Adams and Fort Wetherill, R. I.—License, April 22, 1913, to the Newport & Fall River Street Railway Co., to construct an electric cable line, together with the land connections, across these reservations.

Fort Andrews, Mass.—License, September 6, 1912, to John Irwin to make connection with and obtain water for domestic purposes through the 6-inch water main of this post.

Fort Baker, Cal.—Permit, September 23, 1912, to the Department of Commerce and Labor, to make connection with the 6-inch water pipe line from Sausalito to this post.

Belvoir Tract, Accotink, Va.—Lease, April 3, 1913, of the shore of this reservation, to A. J. Payne, for fishing purposes.

Fort Bliss, Tex.—License, May, 1913, to the El Paso & Southwestern Railway Co., to construct railway spurs and sidings on the reservation.

Boise Barracks, Idaho.—License, March 20, 1913, to the State of Idaho for its organized militia to occupy a portion of the reservation.

Columbus Barracks, Ohio.—Permit, March 12, 1913, to the exchange officer of the recruit depot to operate a small photograph gallery for the use of the garrison.

Fort Douglas, Utah.—License, December 13, 1912, to the H. Wagner Brewing Co., to use road crossing the reservation.

License, October 2, 1912, to Bailey & Sons Co., to use the existing traveled road across the northwest corner of the reservation.

Esplanade Lots, Honolulu, Hawaiian Territory.—Permission granted by E. R. Stackable, lessee of these lots, to the Territory of Hawaii to install a 10-inch oil pipe line across the premises during the unexpired term of his lease, approved by the Assistant Secretary of War December 12, 1912.

Fort Hancock, N. J.—Permit, December 26, 1912, to the lighthouse inspector, Tompkinsville, N. Y., to obtain water from Fort Hancock at Sandy Hook by laying a 1-inch water pipe underground from the nearest water main to the fog-signal house, the Quartermaster Corps to be reimbursed for the water used.

Fort Huachuca, Ariz.—Under act of Congress approved April 27, 1912 (Public No. 136), the Secretary of War, on July 29, 1912, approved location of the line and lands which the El Paso & Southwestern Railway Co. intends to occupy for railroad purposes within the reservation.

License, January 4, 1913, to E. A Tovara, beef contractor, to keep about 100 head (approximately two months' supply) of beef cattle in the south pasture of the reservation.

Jackson Barracks, La.—Permit, November 13, 1912, to the board of levee commissioners, Orleans levee district, to occupy the necessary 75 feet frontage of the reservation for an emergency levee.

Permit, December 7, 1912, to the Cumberland Telephone & Telegraph Co., to replace their poles that cross the reservation at such points as the post commander may direct, the same having been ordered removed by the Orleans levee board.

Permit, December 13, 1912, to the New Orleans Electric Light & Power Co., to place a few power poles at the toe of the levee across the reservation.

License, January 24, 1913, to the New Orleans Railway & Light Co., to construct a street railway track on a banquette on the land side slope of the levee on the reservation.

Camp Keithley, P. I.—License, July, 1912, to G. T. Furuya, to plant guinea grass on the reservation.

Fort Keogh, Mont.—Lease, September 9, 1912, to the board of county commissioners of Custer County, for 5 years from June 1, 1912, at $1 per year, of a portion of the reservation for the holding of an annual county fair.

License, September 19, 1912, to Miles City, Mont., to enter on the reservation and make a cut for the purpose of straightening the channel of the Tongue River and of preventing the river from encroaching upon the said city.

Lease, October 9, 1912, to the Chicago, Milwaukee & Puget Sound Railway Co., for 10 years from November 1, 1912, of 40 acres of land within the reservation, and a right of way thereto, for the removal of gravel and ballast material.

Fort Leavenworth, Kans.—License, June 26, 1913, to the People's Home Telephone Co., to occupy space in the College Building (Sherman Hall).

License, July 13, 1912, to the People's Home Telephone Co., to construct a telephone system on the reservation.

Fort Logan H. Roots, Ark.—License, August 17, 1912, to the Big Rock Stone & Construction Co., to occupy in its business of quarrying and crushing stone two parcels of land within the reservation.

Fort Mason, Cal.—License January 16, 1913, to the Panama-Pacific International Exposition Co., to use the west side of Wharf No. 1 of the transport docks for the unloading of lumber and material for the exposition buildings.

Fort McHenry, Md.—License, December 12, 1912, to the State of Maryland, to occupy as quarters for men attached to the U. S. S. *Somers* assigned with the naval brigade of the State, noncommissioned officers quarters No. 17 (a wooden 1-story building).

Permit, August 9, 1912, to Mrs. E. W. Hubbard, to occupy one of the cottages.

License, November 1, 1912, to the State of Maryland, to occupy for the storage of boats, etc., pertaining to the naval brigade, Maryland National Guard, a wooden quartermaster storehouse (No. 44) on the reservation, together with permission to cut a door in the said building.

Permit, May 14, 1913, to the Secretary of Commerce, to occupy a portion of the reservation with a 60-foot steel tower for lighting the Fort McHenry channel.

Fort McPherson, Ga.—Permit, June 6, 1913, to the State of Georgia, to connect the sewer and water systems for Camp Evans, its mobilization camp and rifle range adjoining the reservation, with the post sewer and water systems.

Fort Meade, S. Dak.—License, February 14, 1913, to the Consolidated Power & Light Co. of South Dakota, to construct an overhead electric light and power transmission line across the military reservation.

Fort Morgan, Ala.—Permit, April 19, 1913, to the Secretary of the Treasury, to connect a water pipe to the fire-protection system of the post, for use of the quarantine station at that point, the Quartermaster Corps to be reimbursed for whatever amount of water is used.

Fort Monroe, Va.—License, February 28, 1913, to the international committee of Y. M. C. A., to erect an addition to the building erected by it upon the reservation.

Fort Morgan, Ala.—License, November 27, 1912, to D. R. Peteet, to construct a telephone line on the reservation, and connect said line with the telephone switchboard of the United States Signal Corps on the reservation.

Fort Myer, Va.—License, March 26, 1913, to the Potomac Electric Power Co., to install four additional street lights on the United States military road to this post.

Fort Niagara, N. Y.—License, June 10, 1913, to the Niagara County Home Telephone Co., to maintain a telephone line on the reservation.

Fort Pickens, Fla.—License, March 17, 1913, to Second Lieut. Guy H. Wyman, Eleventh Cavalry, to occupy approximately 1 acre of land on the reservation, about 30 miles east of the post, and to erect thereon a cottage for himself and family.

Presidio of Monterey, Cal.—License, April 22, 1913, to the Monterey County Water Works, to utilize the back flow from the Government water tanks.

License, June 4, 1913, to the Coast Valleys Gas & Electric Co., to erect an electric-light pole in rear of the cavalry stables on the reservation.

Presidio of San Francisco, Cal.—Permit, August 30, 1912, subject to approval by Congress, for site for buildings that the Japanese Government desires to erect on the reservation in connection with the International Exposition.

Fort Robinson, Nebr.—License, July 24, 1896, to the Crawford Co., to build house on the reservation, was revoked August 27, 1912.

License, May 13, 1913, to the Soldier Creek Telephone Co. (Herman Basse, secretary), to construct a telephone line across the Wood and Timber Reservation.

St. Francis Barracks, Fla.—Lease, August 31, 1912, to the State of Florida, of portion of the reservation to be used by the lessee for the purposes of a State arsenal and general military headquarters of the Organized Militia of the State.

Fort St. Michael, Alaska.—License, April 19, 1913, to Hujo J. Stoll, to occupy for residence purposes a tract of land within that part of the reservation not held for purely military purposes.

San Francisco, Cal.—License, July 3, 1912, to the Great Western Power Co., to install certain overhead power lines, submarine cables, and landings on military reservations in this vicinity.

Permit, March 31, 1913, to the Pacific Telephone & Telegraph Co., to make certain changes in the location of its pole lines and submarine cables in this vicinity.

San Juan, P. R.—License, December, 1912, to the insular authorities, to use a part of the main military reservation at San Juan for the holding of an annual exhibition of the agricultural and general productive industries of the island and for a recreation park.

Permit (by the President), December 19, 1912, to the Compagnie Française des Cables Telegraphiques, to land at, or adjacent to, the city of San Juan, Porto Rico, a line of submarine telegraph cable, or cables, connecting the line of cable as now constructed by the said company along the north side of the island of Porto Rico, with the shore of said island, etc.

Schofield Barracks, Hawaii Territory.—License, November 22, 1912, to the commissioner of public lands, Territory of Hawaii, to use for the purpose of a roadway for access to the public road which crosses the military reservation from the land of Pouhala, a strip of land 40 feet wide alongside and parallel to the existing railroad.

Fort Screven, Ga.—License, January, 1913, to the Southern Bell Telephone & Telegraph Co., to connect its water system at the Tybee Signal Station, adjacent to the post, with the waterworks system of said post, for the purpose of supplying water to said signal station.

Fort Shafter, Hawaii Territory.—January 21, 1913, the Assistant Secretary of War approved location of proposed right of way of the Pearl Harbor Traction Co. (Ltd), through the reservation in accordance with the provisions of act of Congress approved August 24, 1912.

Fort Sill, Okla.—October 10, 1912, the Acting Secretary of War approved location of right of way of the Lawton Railway & Lighting Co. on the reservation in accordance with the provisions of the act of Congress approved August 24, 1912.

Fort Snelling, Minn.—Permit, June 7, 1913, to the Adjutant General, State of Minnesota, to use the reservation as the mobilization camp for the militia of the State.

Sparta Target Range Reservation, Wis.—License, August 2, 1912, to the Milwaukee, Sparta & N. W. Ry. Co., to construct between its station building at McCoy, near Sparta, Wis., and the quartermaster's headquarters at the instruction camp on the reservation, a telephone line for the convenience of the administration of the camp of instruction and said railway company.

Whipple Barracks, Ariz.—License, May, 1913, to the State of Arizona, to occupy a portion of the reservation for the encampment of the Organized Militia of the State during the summer of 1913, to use the target range near said reservation, and to lay the necessary water pipes on the said reservation to supply the encampment with water.

White House or Belvoir Tract, Va.—Lease, February 28, 1913, to Eusa Payne, at $60 per year, of the house formerly occupied by James Duvall, west of the White House Neck near Accotink, Va.

Fort William Henry Harrison, Mont.—Permit, May 28, 1913, to the adjutant general of the State of Montana, to use the rifle range of this post for the State rifle competition.

Fort Wingate, N. Mex.—License, July 20, 1912, to the Atchison, Topeka & Santa Fe Ry. Co., to construct a railroad track on the reservation; and also to change the channel of the Rio Puerco of the West; this license to expire two years from date unless in the meantime authority of Congress for this work is obtained.

EXHIBIT 16.

Statements relative to land and reservations.

PURCHASE OF LAND.

The following is a statement of expenditures, during the fiscal year ending June 30, 1913, made by the Quartermaster Corps, in the acquisition of land in the United States:

Fort Benjamin Harrison, Ind.—For about 20 acres added to the reservation.	$1,950.00
This was paid from the appropriation "Additional land, Fort Benjamin Harrison, Ind."	
Cave Hill National Cemetery, Louisville, Ky.—For 31,250 square feet......	25,000.00
This area was added to the reservation to furnish about 1,000 additional burial sites, and the cost was paid out of a special appropriation for the purpose contained in the sundry civil act approved August 24, 1912.	
Fort D. A. Russell target and maneuver reservation, Wyo.—For 320 acres...	3,590.00
This land consisted of 160 acres purchased from the F. E. Warren Mercantile Co., and 160 acres purchased from Annie McKechnie, and the cost was paid from a special item for the purpose contained in the appropriation "W. & S., M. P."	
Fort D. A. Russell, Wyo.—For 160 acres adjacent to the post reservation..	3,200.00
This land is in continuation of the line of fire of the target range of the post, and was purchased under authority of a special item for the purpose contained in the appropriation "S. G. & R."	

Fort Sam Houston, Tex.—For about 310 acres adjacent to the reservation. This land was purchased from George W. Brackenridge for drill purposes, and the cost was paid out of the special appropriation "Additional land, Fort Sam Houston, Tex.," contained in the sundry civil act approved August 24, 1912.	$70,000.00
Fort Myer, Va.—For 3.7165 acres for roadway to the Arlington Reservation. This road extends from the Highway Bridge to the reservation. The cost was paid out of a special item for the purpose contained in the appropriation "R. W. W. & D., 1913."	5,760.57
Plattsmouth, Nebr.—For 696 acres for a rifle range The cost of this land was paid out of the appropriation "Rifle Range, Nebraska."	24,000.00
Presidio of San Francisco, Cal.—For experts on values of real estate This expenditure was incurred by a board convened to ascertain the values of land and water rights on Lobos Creek, and was paid out of a special appropriation of $100,000 for land and water rights at Lobos Creek, contained in the sundry civil act approved March 4, 1909.	662.50
White House Tract, Va.—For 1,500 acres of land This land was acquired by transfer of funds from the appropriation "Reimbursement to District of Columbia for site acquired for a reformatory" contained in the Army appropriation act for the fiscal year 1913, which transfers the land to the Secretary of War for such purposes as may be hereafter specifically authorized by Congress.	33,000.00

Correspondence received in this office shows that the following expenditures were made by the Department Quartermaster, Philippine Department, during the fiscal year ending June 30, 1913, for land in the Philippine Islands:

Tagabiran, Catubig, Samar, P. I.—For 164,081 square meters of land This land, which includes improvements, was purchased from G. I. Cullen, attorney for Frank C. Griffis.	$304.58
Corregidor Island, San Jose, P. I.—For 2 parcels within the reservation It is understood that these were the only parcels of land within the reservation that remained in private ownership.	1,675.00

EXHIBIT 17.

Changes in military reservations other than those made by purchase of land.

Arizona.—On October 28, 1912, certain sections in this State were reserved for rifle range for the State National Guard, subject to any prior existing valid rights, by Executive order (No. 1633).

Augur Barracks, Jolo, Moro, P. I.—Enlarged by Executive order of February 14, 1913 (No. 1703), so as to include an area of approximately 477.30 acres, subject to private rights if any.

China or Whitehall Cemetery, Pa.—Sold for $226 on December 2, 1912, as authorized and directed in the sundry civil appropriation act approved August 24, 1912.

Fort Duchesne, Utah.—All of the reservation, except 150 acres on which the buildings of the post stand, transferred to the Department of the Interior by Executive order dated August 19, 1912 (No. 1579).

Hot Springs to Fort Gibbon Right of Way, Alaska.—This right of way was re-reserved for use of the Signal Corps by Executive order dated March 14, 1913.

Camp John Hay, Baguio, Benguet, Luzon, P. I.—Modified by Executive order dated September 17, 1912, so as to contain an area of 1,369.02 acres.

Camp Jossman, Guimaras, P. I.—Restored to the government of the Philippine Islands by Executive order dated September 30, 1912, under the provisions of section 12 of the act of Congress approved July 1, 1902.

Fort Lawton, Wash.—On September 13, 1912, the Government roadway from the reservation to a wharf site in the city of Seattle was granted and conveyed to the said city under authority of the sundry civil act of August 24, 1912.

Fort Logan H. Roots, Ark.—On November 25, 1912, certain portions of the reservation, containing 20.75 acres, were sold to the Big Rock Stone & Construction Co. in consideration of $3,112.50, as authorized and directed in act of Congress approved August 14, 1912 (Public, 267).

Fort McHenry, Md.—Part of the reservation (3.25 acres) transferred to the Treasury Department by section 29 of the public-building act, approved March 4, 1913 (Public, 432), for site for immigration station.

Fort Pikit, Cotabato, Moro, Mindanao, P. I.—Military reservation, containing an area of 445.5414 hectares, about 1,101 acres, set apart by Executive order dated October 19, 1912.

Fort Reina Regente, Cotabato, Moro, Mindanao, P. I.—Reservation, containing an area of 58.3118 hectares, about 144 acres, set apart by Executive order dated October 19, 1912.

Fort Ruger, H. T.—Enlarged by Executive order dated April 28, 1913, so as to contain an area of about 754.48 acres.

Siassi, Moro, P. I.—Reservation at this place enlarged by Executive order dated October 19, 1912, so as to include an area of 157.0578 hectares, about 388.1 acres.

Camp Wilhelm, Lucena, Tayabas, Luzon, P. I.—Restored to the government of the Philippine Islands by Executive order dated September 30, 1912, under the provisions of section 12 of the act of Congress approved July 1, 1902.

EXHIBIT 18.

The United States Army transport service.

DEBITS.

Salaries of civilian employees and board wages (including employees of office of subsistence superintendent in work pertaining to the transport service)	$171,962.93
Cost of food furnished in the several messes	411,731.19
Commutation of rations to patients in hospital	4,019.10
Value of ice dropped as wastage	5,520.53
Losses on stores due to deterioration	969.26
Losses on property	23.40
Value of property expended	686.35
Value of miscellaneous issues	2,761.02
Total	597,673.78

CREDITS.

Cash collections for meals	88,110.78
Amount paid and collectible on account of meals furnished bureaus and other departments of the Government	42,091.70
Miscellaneous sales, correction of errors, etc	392.75
Gains in stores	594.35
Credit given for value of issues to troops, civilian employees, and general prisoners	61,976.52
Total	193,166.10

SUMMATION.

Total debts	597,673.78
Total credits	193,166.10
Net cost	404,507.68

EXHIBIT 19.

Statement of issues made during fiscal year 1913.

Garrison, travel, haversack, and trail rations (29,767,537), average cost, 23.41387 cents	$6,969,732.54
Filipino rations (2,188,848), average cost, 17.11074 cents	374,528.11
Emergency rations (9,856)	3,379.91
Articles other than ration articles issued	122,567.18
Ice issued	67,880.05
Recruit kits issued	32,671.60
Housewives issued	687.94
Gratuitous issues to destitutes, etc	3,010.01
Reimbursement issues	1,944.04
Issues to Indian prisoners of war	10,595.37
Total value of issues	7,586,996.75

EXHIBIT 20.

Number, value, and average cost of rations, by geographical divisions, etc., issued during the fiscal year 1913.

Division.	Number of rations.	Value.	Average cost (cents).
United States[1]	22,675,086	$5,230,135.34	23.07
Alaska	400,949	140,213.88	34.97
Hawaii	1,583,733	389,096.65	24.56
Porto Rico	230,179	63,878.15	27.75
Transports	226,923	61,976.52	27.31
Philippines (American)	4,650,667	1,084,432.00	23.31
Total and average cost (American)	29,767,537	6,969,732.54	23.41
Philippines (native)	2,188,848	374,528.11	17.11
Canal Zone	281,742	87,890.11	31.19

[1] Includes Canal Zone.

Statement showing average cost of the ration with and without transportation.

The average cost of the actual food included in the garrison (American) ration during the fiscal year was as follows:

	Cents.
At all posts or stations in the United States	23.3962
At all posts or stations in the Philippines and on transports	23.5086
At all posts or stations in the United States, Philippines, and on transports	23.4138

The cost of transporting subsistence stores during the fiscal year amounted to $262,956.27. This includes the cost of transportation for the ration articles, sales articles, and property. Charging this amount to the total cost of the garrison ration issued, it gives for the past fiscal year an increased cost for each ration of 0.8834 cents, thus making the cost of the garrison ration, delivered, including food and transportation, as follows:

	Cents.
At all posts or stations in the United States	24.2796
At all posts or stations in the Philippine Islands and on transports	24.3870
At all posts or stations in the United States, Philippine Islands, and on transports	24.2972

EXHIBIT 21.

Statement showing the yearly and per diem cost of subsistence per man in the United States and Philippines.

	Number of rations.	Daily average number of men.	Net cost.	Average cost per year.	Average cost per diem (cents).
Cost in the United States	24,892,078	68.197	$7,416,461.62	$108.75	29.79
Cost in the Philippines	7,064,307	19.354	2,094,801.41	108.23	29.65

The above gives expenditures made in the United States and Philippines, respectively, from appropriation for "Subsistence of the Army, 1913," and includes cost of rations issued, commutation of rations of all kinds, ice, meals, clerical hire, extra-duty pay, net cost of transport service, net losses of stores and property; in other words, indicates the actual cost per man per day in the United States and Philippine Islands, as far as subsistence is concerned.

EXHIBIT 22.

Cost of transportation accounts for the fiscal year 1913, as reported on Form 149.

Item No.	Purpose.	Amount.
1	Transportation of the Army	$916,572.50
1a	Transportation of impedimenta and organization property accompanying troops changing station	138,582.37
1b	Transportation of public animals with troops changing station	74,122.09
1c	Transportation of horses of officers changing station	37,960.56
1d	Procurement of street car tickets and commutation railroad tickets	830.00
		1,168,067.52
2	And its supplies	7,390.87
2a	Transportation of signal stores	36,966.76
2b	Transportation of engineer stores	25,050.33
2c	Transportation of medical stores	30,340.75
		99,748.71
3	Transportation of baggage	20.60
3a	Change of station of officers	225,184.07
3b	Change of station of enlisted men	23,142.11
3c	Change of station of civilian employees, Adjutant General's Department	628.15
3d	Change of station of civilian employees, Inspector General's Department	58.22
3e	Change of station of civilian employees, Judge Advocate General's Department	67.28
3f	Change of station of civilian employees, Quartermaster's Department	4,865.60
3g	Change of station of civilian employees, Subsistence Department	259.68
3h	Change of station of civilian employees, Medical Department	330.22
3i	Change of station of civilian employees, Corps of Engineers	94.95
3j	Change of station of civilian employees, Ordnance Department	83.18
3k	Change of station of civilian employees, Signal Corps	88.60
3l	Change of station of civilian employees, Pay Department	95.31
		254,917.97
5	Transportation of recruits	409,438.07
6	Transportation of recruiting parties	14,842.54
6a	Street car tickets and commutation railroad tickets	75.00
		14,917.54
7	Transportation of applicants for enlistment	130,994.25
	Street car tickets and commutation railroad tickets	70.00
		131,064.25
8	Transportation of persons	20,893.07
9	Transportation of supplies to the militia	56.04
9a	Clothing	6,901.99
9b	Camp and garrison equipage	5,183.60
9c	Other quartermaster's stores	7,707.86
9d	Subsistence stores	414.86
9e	Medical supplies	1,644.08
9f	Engineer's supplies	128.47
9g	Ordnance, ordnance stores, and small arms	13,215.26
9h	Signal stores	1,062.39
		36,314.55
10	Transportation of necessary agents and other employees	
10a	Of the Adjutant General's Department	1,806.25
10b	Inspector General's Department	187.90
10c	Judge Advocate General's Department	273.34
10d	Quartermaster's Department	21,135.43
10e	Subsistence Department	3,008.39
10f	Medical Department	1,967.82
10g	Corps of Engineers	270.20
10h	Ordnance Department	1,958.70
10i	Signal Corps	742.64
		31,350.67
11	Transportation of clothing and equipage	182,882.04
12	Transportation of other quartermaster's stores	591,914.37
12a	Transportation of Cavalry, Artillery, and Engineer horses from place of purchase	36,105.32
12b	Transportation of draft and pack animals from place of purchase	15,022.40
		643,042.09

EXHIBIT 22—Continued.

Cost of transportation accounts for the fiscal year 1913, as reported on Form 149—Continued.

Item No.	Purpose.	Amount.
13	Transportation of horse equipments	$460.69
14	Transportation of subsistence stores	262,956.27
15	Transportation of ordnance, ordnance stores, and small arms	434,193.15
19	Transportation of funds	5,421.70
	Total	3,695,668.29

APPROPRIATION ARMY TRANSPORTATION, MEXICAN BORDER, FISCAL YEAR 1913.

1	Transportation of the Army	$319,018.26
1a	Transportation of impedimenta and organization property accompanying troops changing station	34,202.82
1b	Transportation of public animals with troops changing station	30,341.47
1c	Transportation of horses of officers changing station	2,981.05
2	And its supplies	1.36
2a	Transportation of signal stores	2,814.66
2b	Transportation of engineer stores	501.50
2c	Transportation of medical stores	1,491.47
3a	Transportation of baggage	....
3a	Change of station of officers	1,380.57
3b	Change of station of enlisted men	363.55
3f	Change of station of civilian employees, Quartermaster's Department	69.52
5	Transportation of recruits	444.92
9	Transportation of supplies to the Militia	....
9b	Camp and garrison equipage	1.62
9d	Subsistence stores	4.50
10	Transportation of necessary agents and other employees	....
10a	Of the Adjutant General's Department	296.90
10d	Quartermaster's Department	2,432.18
11	Transportation of clothing and equipage	25,145.95
12	Transportation of other quartermaster's stores	21,518.89
12a	Transportation of Cavalry, Artillery, and Engineer horses from place of purchase	3,248.37
12b	Transportation of draft and pack animals from place of purchase	1,883.06
13	Transportation of horse equipments	11.73
14	Transportation of subsistence stores	13,498.14
15	Transportation of ordnance, ordnance stores, and small arms	8,792.19
19	Transportation of funds	123.11
	Total	470,567.79

NOTE.—These amounts are included in total cost of transportation for the fiscal year 1913.

EXHIBIT 23.

Statement showing shipments to Manila, P. I., at the through rate of $15 per ton of 2,000 pounds, or 40 cubic feet, carrier's option.

Shipped from—	Route.	Tons.	Cubic feet.	Cost.
Rock Island	Atchison, Topeka & Santa Fe	113	9,754	$3,349.00
Do	Southern Pacific	20	2,197	800.00
Do	Western Pacific	68	5,435	2,276.00
Jeffersonville	Atchison, Topeka & Santa Fe	25	2,920	1,099.30
Do	Southern Pacific	34	2,900	1,178.56
Do	Denver & Rio Grande-Western Pacific	127	10,280	3,858.41
Kansas City	Atchison, Topeka & Santa Fe	103	4,641	1,523.37
Do	Union Pacific	90	3,400	981.20
Do	Missouri Pacific	99	5,270	1,486.28
Chicago	Atchison, Topeka & Santa Fe	167	8,263	2,507.00
Do	Union Pacific	539	26,883	8,036.00
Do	Western Pacific	288	14,244	3,580.00
Total		1,663	96,187	30,675.12

EXHIBIT 24.

Shipments from New York City to Manila, P. I., via Atchison, Topeka & Santa Fe system, Galveston & San Francisco, at rate of $10 per ton of 2,000 pounds or 40 cubic feet, carrier's option.

Tons	2,580
Cubic feet	155,188
Cost	$38,795.00

EXHIBIT 25.

Shipments from New York City to Pacific coast points under contract with the Southern Pacific Co., at rate of 60 cents per 100 pounds.

Tons	6,016
Cost	$72,200.92

EXHIBIT 26.

Statement showing weights and cost of shipment, and packing for shipment, baggage of officers, noncommissioned officers, and civilian employees.

	Baggage.	Professional books.
	Pounds.	*Pounds.*
Officers	13,883,150	1,476,509
Noncommissioned officers	1,340,865	17,564
Civilians	398,396	
Total	15,622,411	1,494,073

Cost of shipment	$254,917.97
Cost of packing and crating	67,787.28
Total	322,705.25

EXHIBIT 27.

Statement showing cost of the military telegraph lines in Alaska, exclusive of operations of the cable ship "Burnside," to the Quartermaster's Corps.

Transportation	$12,725.85	Storage	$2,970.00
Pay of employees	7,460.50	Telephones	242.00
Forage	12,080.40	Commutation rations	5,748.75
Heat and light	5,831.51	Miscellaneous	880.75
Lodgings and quarters	5,663.00		
Repairs	1,374.01	Total	56,976.77

EXHIBIT 28.

Wharves, docks, and landing places for harbor boats.

Location.	Purpose for which used.	Annual cost.
Seattle, Wash	Pier 11, (Oriental Dock)	$9,600.00
New York City	Pier 12, East River	19,040.00
Newport News	Wharf for tug Lt. Cushing	420.00
Boston, Mass	National Dock, harbor boats	1,200.00
Do	Commercial wharf, passenger wharf	708.33
Do	Central wharf, passenger wharf	3,437.50
Washington, D. C	Forsberg wharf, harbor boats	800.00
San Diego, Cal	Santa Fe wharf, harbor boats	840.00
Port Townsend	Tyler Street wharf, harbor boats	1,800.00
Skagway, Alaska	Landing place	120.00
Astoria, Oreg	Docking privileges	240.00

EXHIBIT 28—Continued.

Wharves, docks, and landing places for harbor boats—Continued.

Location.	Purpose for which used.	Annual cost.
Valdes, Alaska	Docking privileges	$168.00
Fort Andrews	Wharf, Hull, Mass	1,200.00
Fort Barrancas	Wharf, Pensacola, Fla	540.00
Fort Caswell	Wharf, Wilmington, N. C	240.00
Fort Constitution	Wharf, Portsmouth, N. H	180.00
Fort Dade	Wharf, Tampa, Fla	800.00
Fort DuPont	Wharf, Delaware City, Del	360.00
Fort Hamilton	Wharf, coast defense vessels	240.00
Fort Howard	Wharf, Baltimore, Md	680.00
Fort Morgan	Wharf, Mobile, Ala	1,200.00
Fort Screven	Wharf, Savannah, Ga	280.00
Key West Barracks	Wharf, Key West, Fla	119.00
Fort Slocum	Wharf, New Rochelle, N. Y	3,000.00
Washington Barracks	Wharf, Alexandria, Va	48.00
Fort Williams	Wharf, Portland, Me	2,000.00
Fort H. G. Wright	Wharf, New London, Conn	2,400.00
Governors Island	Wharf, New York City, ferry boat landing	1,500.00
Total		52,160.83

EXHIBIT 29.

Cost of hire of cartage and drayage $79,075.24

EXHIBIT 30.

Cost of street-car and ferry tickets $24,307.72

EXHIBIT 31.

Statement showing shipments in deep-sea commercial vessels.

	General merchandise, forage, etc.	Lumber.	Passengers.	Cost.
AMERICAN.	*Tons.*	*Feet.*		
Philippines	4,144			$35,717.05
Hawaii	14,774	207,128	23	85,181.38
Porto Rico	1,339			9,018.90
Alaska	5,092	480,419	124	88,149.31
Other ports	518			12,042.03
Total	25,867	687,547	147	230,108.67
FOREIGN.				
Philippines	7,350			65,494.57
Other ports	5			230.95
Total	7,355			65,725.52
Grand total	33,222	687,547	147	295,834.19

Transportation accounts received and acted on during the fiscal year 1913.

Payable.	Number.	Amount.
Appropriation Army transportation	355	$61,790.12
Other departments	566	20,232.69
Total	921	82,022.81

EXHIBIT 32.

Statement showing automobiles and motor trucks in service; their station; purpose for which used; annual cost for supplies; operation and repairs; mileage; tonnage hauled; cost per mile for automobiles and cost per ton-mile for motor trucks, when practicable to obtain data.

AUTOMOBILES AND MOTOR TRUCKS PURCHASED DURING FISCAL YEAR 1913.

Date purchased.	Name of machine.	Capacity.	Serial No.	Cost.	Purpose.
July, 1912	White	1½ tons	13071	$2,550.00	Washington depot.
March, 1913	do	do	16616	2,750.00	Galveston depot.
Do	do	do	16552	2,750.00	Do.
Do	do	do	16639	2,750.00	Do.
Do	do	do	16640	2,750.00	Do.
May, 1913	do	do	17372	2,835.00	Fort Sill, Okla.
September, 1912	Rambler	Automobile.	31702	1,800.00	San Francisco, Cal.
March, 1913	White	do	15910	2,000.00	Galveston depot.
May, 1913	Cadillac	do		2,389.72	Hawaiian dept.
Total				22,574.72	

AUTOMOBILES ON HAND JUNE 30, 1913.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Cost per mile.
Mitchell, 1912	Texas City	Commanding general, Second Division.	$1,654.79	6,317	$0.262
Rambler, 1912	Honolulu	Constructing quartermaster.	543.56	7,297	.075
Cadillac, 1913	do	Department commander.	143.50	2,000	.072
Studebaker, 1911	do	Brigade commander	1,946.25	12,804	.16
White (ambulance)	Schofield Barracks	Post	409.11	4,911	
Studebaker, 1911	San Francisco	Commanding general, Western Division.	1,843.19	6,330	.291
White, 1913	Galveston	Depot quartermaster	457.99	8,114	.0749
Franklin, 1906	West Point	Superintendent Military Academy.	991.12	6,424	.13
White, 1907	do	Hospital Corps	1,956.38	6,338	.30
White, 1911	do	Quartermaster Corps	862.50	4,404	.18
Mayfield, 1912 (White)	Front Royal	Depot quartermaster	787.36	5,667	.139
White, 1911	Fort Sam Houston	Depot headquarters	1,148.50	8,451	.136
Franklin [1]	do				
Cadillac, 1906	San Francisco	Depot quartermaster	901.98	4,609	.196
Rambler, 1913	do	do	1,466.04	5,268	.277
Cadillac, 1909	Washington	do	96.57	3,113	.045
White, 1911	do	do	1,380.62	8,704	
Hudson, 1911	do	do	257.51	6,741	.0382
Stoddard-Dayton, 1909	do	Attending surgeon	435.05	4,754	.0915
White, 1908	do	Secretary of War	1,693.60	8,105	.208
Franklin, 1908	do	Signal Corps	1,501.91	4,522	.334
Cadillac	Governors Island	Commanding general, Eastern Division.	481.53	3,200	.15
Briarcliff	New York City	R. O	1,252.12	4,882	.256
Total			22,211.18		

MOTOR TRUCKS ON HAND JUNE 30, 1913.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Tons hauled 1 mile.	Cost per ton per mile.
Mais	Fort D. A. Russell	Quartermaster Corps	$309.85	2,624	([2])	
Gramm, 1912	Presidio of San Francisco.	do	738.75	675		
White, 1913	Galveston	Depot quartermaster	371.00	3,475	2,847	$0.134
Do	do	do	450.75	2,935	2,592	.164
Do	do	do	297.39	3,142	3,091	.0962
Do	do	do	302.37	3,211	3,476	.0869
Do	West Point	Quartermaster Corps	813.62	3,337	([3])	
Alco, 1912	do	do	287.72	1,968	([3])	
Do	do	do	296.15	2,150	([3])	

[1] Unserviceable; to be sold.

[2] No record.

[3] No record kept.

EXHIBIT 32—Continued.

Statement showing automobiles and motor trucks in service; their station; purpose for which used; annual cost for supplies; operation and repairs; mileage; tonnage hauled; cost per mile for automobiles and cost per ton-mile for motor trucks, when practicable to obtain data—Continued.

MOTOR TRUCKS ON HAND JUNE 30, 1913—Continued.

Machine.	Station.	By whom used.	Annual cost.	Mileage.	Tons hauled 1 mile.	Cost per ton per mile.
White	Hachita, N. Mex	Thirteenth Cavalry	$1,401.40	5,462	(1)	
Do	Fort Huachuca	Quartermaster Corps	2,161.65	9,000	(1)	
Sampson	Fort Sam Houston	do	1,754.18	6,822	1,311	$0.5353
Automatic electric	Philadelphia	Depot quartermaster	1,022.00	1,400		.073
General electric	do	do	1,090.08	1,725		.0632
Packard, 1910	San Francisco	do	1,815.70	5,742	9,511	.191
Do	do	do	2,055.30	5,495	8,890	.231
White, 1910	do	do	1,731.17	5,305	5,192	.211
Mais	do	do	1,223.80	3,107	1,004	1.21
Wilcox, 1911	Washington	do	1,150.33	5,533	4,149	.268
Mack, 1911	do	do	416.73	3,140	2,305	.18
White, 1911	do	do	1,480.28	9,310	6,982	.212
Do	do	do	1,528.63	8,007	6,004	.255
Mais, 1912	El Paso	do	998.77	7,886	2,115	.472
White	Texas City	Aviation squad	290.00			
Four-wheel drive	San Diego	do	484.07	350		
Total			24,868.41			

[1] No record kept.

Statement showing cost of wagons, harness, etc., purchased during fiscal year ending June 30, 1913.

Articles.	Point of issue or purchase.	Number.	Cost.	
			Total.	Average.
Wagons, escort	Jeffersonville, Ind	800	$87,298.00	$109.12
Wagons, farm	Fort Reno	3	165.00	55.00
Do	Front Royal	7	498.00	71.14
Do	Headquarters, Southern Department	1	162.00	162.00
Total		11	825.00	75.00
Wagons, delivery	Jeffersonville, Ind	1	148.25	148.25
Wagons, spring, water	Galveston, Tex	2	640.00	320.00
Do	San Francisco, Cal	1	395.00	395.00
Total		3	1,035.00	345.00
Ambulances	Jeffersonville, Ind	25	4,783.75	191.35
Wagons, miscellaneous	Seattle, Wash	1	36.50	36.50
Do	Jeffersonville, Ind	1	30.86	30.86
Total		2	67.36	33.68
Carts, hand	St. Louis, Mo	3	37.50	12.50
Sleds	Seattle, Wash	5	205.50	41.10
Do	Headquarters, Western Department	3	72.50	24.16
Total		8	278.00	34.75
Bicycles	Sandy Hook Proving Ground	2	50.00	25.00
Do	Jefferson Barracks, Mo	2	59.00	29.50
Do	Central Department	3	87.75	29.25
Do	San Francisco, Cal	2	64.50	32.25
Total		9	261.25	29.00
Harness, s. s. wheel	Jeffersonville, Ind	1,022	20,178.42	19.76
Do	Philadelphia, Pa	4	124.00	37.25
Total		1,026	20,302.42	19.79

EXHIBIT 32—Continued.

Statement showing cost of wagons, harness, etc.; purchased during fiscal year ending June 30, 1913—Continued.

Articles.	Point of issue or purchase.	Number.	Cost.	
			Total.	Average.
Harness, s. s. lead	San Francisco, Cal	40	$774.00	$18.00
Do	Jeffersonville, Ind	768	13,611.00	17.72
Total		808	14,385.00	17.80
Harness, s. s. cart	Jeffersonville, Ind	20	418.20	20.76
Harness, s. s. plow	Front Royal, Va	30	135.20	4.50
Harness, s. s. dog	Headquarters, Western Department	14	101.50	7.25
Saddles	San Francisco, Cal	9	243.00	27.00
Do	Jeffersonville, Ind	125	2,935.75	23.48
Do	Fort Keogh, Mont	2	64.50	32.25
Total		136	3,243.25	23.85
Aparejos	Jeffersonville, Ind	10	410.50	41.05
Grand total		2,906	133,725.18	

Of the above there were issued to points beyond the seas and to the State militia, as follows:

Articles.	Point of issue or purchase.	Number.	Cost.	
			Total.	Average.
To Alaska:				
Dog harness	Headquarters, Western Department	14	$101.50	$7.25
Carts, hand	Jeffersonville, Ind	1	16.96	16.96
Harness, b. b	do	2	48.40	24.20
Saddle, riding	San Francisco, Cal	1	19.90	19.90
Wagons, miscellaneous.	Seattle, Wash	1	36.50	36.50
Sleds, bob	do	5	205.50	41.10
Total		24	428.76	
To Philippines:				
Carts, hand	Jeffersonville, Ind	26	642.00	17.00
Aparejos	do	10	410.00	41.00
Total		36	1,052.00	
To Porto Rico:				
Ambulance	Jeffersonville, Ind	1	209.23	209.23
To State militia:				
Escort wagons	do	360	47,296.00	131.37
Ambulances	do	1	206.23	206.23
Harness, s. s. wheel	do	628	13,024.72	20.74
Harness, s. s. lead	do	670	11,825.50	17.65
Total		1,659	71,851.45	

EXHIBIT 33.

Principal movement of troops.

First Cavalry, three squadrons, changing station, Hawaii to Southern Department	$10,042.00
First Cavalry, one squadron, changing station, Western Department	4,243.00
First Cavalry, three squadrons, changing station, Western Department	3,949.90
Third Cavalry, one troop, changing station, Southern Department	735.00
Third Cavalry, two troops, changing station, Southern Department	940.00
Third Cavalry, one troop, changing station, Southern Department	450.00
Third Cavalry, one troop, changing station, Southern Department	636.18
Third Cavalry, one troop, changing station, Southern Department	1,188.63

Third Cavalry, three troops, changing station, Southern Department	$4,500.00
Fourth Cavalry, one regiment, changing station, Hawaiian Department	2,587.50
Fourth Cavalry, one regiment, changing station, Southern to Hawaiian Department	27,587.00
Fifth Cavalry, one regiment, changing station, Hawaiian Department	2,799.87
Fifth Cavalry, two troops, changing station, Hawaiian to Southern Department	2,330.00
Fifth Cavalry, one regiment, changing station, Hawaiian to Southern Department	29,750.00
Ninth Cavalry, one regiment, changing station, Central to Southern Department	44,552.00
Thirteenth Cavalry, one regiment, changing station, Central to Southern Department	38,258.00
Fourteenth Cavalry, two squadrons, changing station, Southern Department	440.00
Fourteenth Cavalry, two troops, changing station, Southern Department	1,089.95
Fourteenth Cavalry, three troops, changing station, Southern Department	122.95
Cavalry, 3 officers, 487 men, changing station, Southern Department	1,015.60
Second Field Artillery, one battalion, Vancouver Barracks to Seattle	980.00
Third Field Artillery, Battery B, changing station, Southern Department	3,010.00
Fourth Field Artillery, one company, changing station, Central Department	7,291.80
Fourth, Fifty-fifth, and Eighty-first Coast Artillery Companies, three companies, changing station, Eastern Department	2,759.80
Fifty-fifth Coast Artillery Company, one company, changing station, Eastern to Western Department	5,342.64
Seventy-fifth Coast Artillery Company, one company, changing station, Eastern to Western Department	4,980.00
One oundred and fourth Coast Artillery Company, one company, changing station, Eastern Department	2,110.40
One hundred and fourth Coast Artillery Company, one company, changing station, Eastern to Western Department	3,344.29
One hundred and thirty-ninth Coast Artillery Company, one company, changing station, Eastern Department	1,000.12
Fourth Infantry, three battalions, changing station, Eastern to Central Department	2,383.30
Fourth Infantry, one battalion, changing station, Eastern to Central Department	3,000.32
Ninth Infantry, three battalions, changing station, Southern to Eastern Department	4,919.53
Ninth Infantry, one regiment, changing station, Western to Central Department and Eastern Department	25,287.51
Ninth Infantry, two battalions, changing station, Central to Eastern Department	4,017.19
Ninth Infantry, one battalion, changing station, Southern Department	1,403.00
Twelfth Infantry, one company, changing station, Western Department	1,544.00
Fourteenth Infantry, three battalions, changing station, Central to Western Department	3,775.10
Fourteenth Infantry, one battalion, changing station, Western Department	4,993.80
Seventeenth Infantry, three companies, changing station, Eastern Department	650.00
Eighteenth Infantry, one battalion, changing station, Southern to Central Department	8,970.10
Eighteenth Infantry, one battalion, changing station, Southern to Central Department	8,920.50
Nineteenth Infantry, one battalion, changing station, Southern Department	4,345.00
Nineteenth Infantry, two battalions, changing station, Central Department	4,983.50
Twenty-second Infantry, one regiment, changing station, Southern Department	17,850.00
Twenty-fifth Infantry, one regiment, changing station, Hawaiian Department	2,621.22
Twenty-fifth Infantry, one regiment, changing station, Western to Hawaiian Department	9,849.28

Twenty-fifth Infantry, two battalions, changing station, Western Department	$2,324.20
Twenty-ninth Infantry, one battalion, changing station, Eastern Department	774.00
Hospital Corps, C, changing station, Eastern Department	791.08
Field Hospital No. 3, changing station, Eastern Department	264.70
Engineers, one company, changing station, Eastern Department	1,402.24
Signal Corps, Company A, changing station, Central to Eastern Department	7,988.50
Field Hospital No. 3, changing station, Eastern to Central Department	1,948.00
Total	333,042.71

SPECIAL MOVEMENTS.

Troops, from Schofield Barracks to Honolulu	129.39
Fifteenth Cavalry, first squadron band, and Third Field Artillery, battery D, Fort Myer to Staunton, and return	7,129.00
One hundred and twelfth Company Coast Artillery, 13 band, Fort Dupont to Altoona, Pa., and return	1,158.87
Troops, 107 men, Columbus to Wheeling, W. Va	619.15
Seventeenth Infantry, one regiment, Fort McPherson to Washington, and return, inaugural parade	11,411.80
Cadets, West Point to Washington, and return, inaugural parade	5,007.75
Coast Artillery, 418 men, Fort Monroe to Washington, and return, inaugural parade	2,957.00
One company, 105 men, Columbus, Ohio, to Wheeling, W. Va., and return	619.50
Total	29,032.46

Movement of troops to mobilization camps in Texas.

In addition to the regular and special movement of troops shown above, under orders of the War Department, issued February, 1913, the following organizations changed station from posts in the Central Department to mobilization camps at Galveston and Texas City, Tex. The cost of transportation is shown below:

Ambulance Company No. 3, Fort Leavenworth, Kans	$3,418.30
Sixth Cavalry, Fort Des Moines, Iowa	23,825.00
Fourth Field Artillery, Fort D. A. Russell, Wyo	34,528.00
Seventh Infantry, Fort Leavenworth, Kans	24,429.35
Fourth Infantry, two battalions, Fort Crook, Nebr	17,027.65
Eleventh Infantry, Fort D. A. Russell, Wyo	27,012.00
Eighteenth Infantry, one battalion, Fort Missoula, Mont	11,232.00
Eighteenth Infantry, two battalions, Fort McKenzie, Wyo	21,323.12
Nineteenth Infantry, one battalion, Fort Leavenworth, Kans	9,458.95
Nineteenth Infantry, one battalion, Fort Sill, Okla	3,417.20
Nineteenth Infantry, one battalion, Fort Meade, S. Dak	15,454.00
Twenty-third Infantry, Fort Benjamin Harrison, Ind	24,458.32
Twenty-sixth Infantry, one battalion, Fort Brady, Mich	7,386.85
Twenty-sixth Infantry, two battalions, Fort Wayne, Mich	15,021.00
Twenty-seventh Infantry, Fort Sheridan, Ill	22,346.00
Company D, Signal Corps, Fort Leavenworth, Kans	3,418.39
Twenty-eighth Infantry, Fourth Infantry, one battalion, Fort Snelling, Minn	30,697.00
Total	294,453.13

EXHIBIT 34.

Transportation—Freight and passenger.

UNITED STATES.

During the fiscal year there were transported by the Quartermaster Corps 116,774 passengers, 15,060 animals, 324,448 tons of freight, $5,192,089.78 funds; and 220 remains of officers, enlisted men, and civilians, as shown by the following statement:

	Railroad.	Commercial vessels.	Wagon.	Stage	Express.	Total.
Passengers.						
Officers	4,677	91	214	12		4,994
Enlisted men	102,526	4,056	824	167		107,573
Civilians	3,847	342	15	3		4,207
Total	111,050	4,489	1,053	182		116,774
Animals.						
Horses	10,139	388	1		53	10,581
Mules	4,329	150				4,479
Total	14,468	538	1		53	15,060
Stores (tons).						
Quartermaster Corps	177,884	35,364	11,852		978	226,078
Ordnance	29,966	12,025	1,764		30	43,785
Medical	1,303	1,772	12		9	3,096
Engineer	1,560	1,797	37		1	3,395
Signal	1,753	919	11		8	2,691
Miscellaneous	13,223	2,551	29,627		2	45,403
Total	225,689	54,428	43,303		1,028	324,448
Funds		$130,834.00	$4,124.00		$5,057,131.78	$5,192,089.78
Remains	78	4	2		136	220

This statement indicates a decrease of 12,780 passengers from those transported during the fiscal year 1912, and an increase of 1,971 animals and 70,408 tons of freight. The decrease in number of passengers transported is due to the establishment of a colonial army for permanent service in the Philippine Islands, thereby reducing the number of troops requiring transportation between stations in the United States and the Philippine Islands. The increase in the number of animals and tons of freight transported is due to the mobilization of troops at Galveston and Texas City, Tex., requiring large shipments of means of transportation and supplies for their use at mobilization camps. Quartermaster Corps supplies show an increase of 59,839 tons over shipments during the fiscal year 1912. Ordnance stores, an increase of 14,613 tons, due to shipments of heavy ordnance to the Philippine Islands, Hawaiian Islands, and Canal Zone. Medical stores, an increase of only 49 tons. Engineer stores, an increase of 820 tons. Signal stores, an increase of 94 tons. Miscellaneous stores (stores for other departments of the Government), an increase of 6,103 tons. No charge for transportation is made against Quartermaster Corps appropriations for transportation of miscellaneous stores, the charges being paid from appropriations of the departments concerned.

PHILIPPINE ISLANDS.

During the fiscal year there were transported by the Quartermaster Corps 15,643 passengers, 461 animals, 35,829 tons of freight, $597,853.95 funds, and 23 remains of officers, enlisted men, and civilians, as shown by the following statement:

	Railroad.	Commercial vessels.	Wagon.	Stage.	Express.	Total.
Passengers.						
Officers	607	27	870	141		1,645
Enlisted men	10,418	149	1,872	932		13,371
Civilians	333	40	151	103		627
Total	11,358	216	2,893	1,176		15,643

	Railroad.	Commercial vessels.	Wagon.	Stage.	Express.	Total.
Animals.						
Horses	279	13	....	....	16	308
Mules	134	14	....	....	5	153
Total	413	27	....	....	21	461
Stores (tons).						
Quartermaster Corps	19,857	56	12,133	1,354	36	33,437
Ordnance	277	5	79	....	....	361
Medical	105	1	31	....	1	138
Engineer	35	....	3	....	....	38
Signal	46	....	22	2	....	70
Miscellaneous	1,874	....	854	56	1	2,785
Total	22,194	62	12,122	1,412	38	35,829
Funds	$230,045.79	$5,749.45	$360,000.00	....	$2,058.71	$597,853.95
Remains	23	....	....	....	....	23

Wharves, docks, and landing places, leased or hired.

PHILIPPINE ISLANDS.

During the fiscal year wharfage space was leased, for the landing of supplies, etc., as shown below:

	Cost per annum.
Manila, P. I.	$2,000
Camp Bumpus, Leyte, P. I.	120

EXHIBIT 35.

Personal effects of officers, noncommissioned officers, and civilians shipped at public expense.

PHILIPPINE ISLANDS.

During the fiscal year the personal effects of officers, noncommissioned officers and civilians shipped at public expense were as follows:

	Personal effects.	Professional books.
	Pounds.	*Pounds.*
Officers	1,050,491	29,925
Noncommissioned officers	91,424	128
Civilians	32,893	....
Total	1,174,808	30,053

Movement of troops.

PHILIPPINE ISLANDS.

The cost of principal and special movements of troops during the fiscal year was $3,730.

EXHIBIT 35—Continued.

Automobiles and motor trucks on hand, June 30, 1913.

PHILIPPINE ISLANDS.

AUTOMOBILES.

Machine.	Annual Cost.	Mileage.	Cost per mile.
Hupmobile, 13	$263.73	3,528	$0.072
White, 13	1,419.82	6,665	.213
White (bus)	1,000.08	6,800	.147
Do	967.50	6,393	.151
White	(1)	10,000	....
Mitchell, 12	404.13	(2)	....
Overland, 12	330.84	(2)	....

MOTOR TRUCKS.

Machine.	Annual cost.	Mileage.	Tons hauled 1 mile.	Cost per ton per mile.
White	$1,128.06	3,321	4,365	$0.27
Do	804.70	2,985	5,226	.15
Do	1,170.38	4,426	2,068	.38
Do	1,328.97	7,393	5,737	.23
Do	1,398.61	6,108	3,093	.44
Do	1,428.37	7,538	(2)	....
Do	884.15	2,160	1,018	.82
Peerless	837.61	762	2,010	.08
Do	34.55	200	117	.29
Couple-gear	873.16	1,629	5,319	.16

[1] Not given.

[2] No record.

REPORT OF THE SURGEON GENERAL.

War Department,
Office of the Surgeon General,
Washington, August 30, 1913.

The Secretary of War.

Sir: I have the honor to submit herewith a report upon the work of the Medical Department, with a study of the health and sanitary conditions of the Army for the calendar year 1912, and a financial statement for the fiscal year ending June 30, 1913. I desire at this point to invite especial attention to certain points of interest in this report.

Constantly noneffective rates.

The constantly noneffective rate, which is a statement of the average number of men in each 1,000 incapacitated for duty by disease or injury each day during the year, is the true measure of the loss in efficiency of the Army from disease and injury. By reference to Chart A, which shows these rates for the American Army from 1867 to 1912, inclusive, it will be seen that the rate for 1912 was by far the lowest on record in this office, noneffective rates not being compiled prior to 1867. Chart B, giving this same rate for disease only for the American Army, shows that the rate for 1912 was exactly the same as that for 1895 and only slightly higher than that for 1896, the lowest on record for our Army. In considering these rates it must be borne in mind, however, that prior to the Spanish-American War in 1898 our troops were not exposed to such a large extent to diseases incident to exposure to tropical climates. The rates prior to 1898 were for the United States only, and in reality to show the true health conditions now as compared with that period the rates for the United States alone should be considered. This rate for disease in the United States in 1912 was 22.57 per 1,000, which is much lower than the corresponding lowest Army rate, 25.23, for 1896. For the United States, continental, the total rate for disease and injury was the lowest recorded. In 1912 there were 150 less men constantly sick than in 1911, although the average strength in 1912 was 3,134 more than in 1911.

In the Philippine Islands the noneffective rate for American troops, both for disease and injury, was higher in 1912 than in 1911. The rate for disease was 39.85 per 1,000, while in the United States it was, as stated above, 22.57. Thus is shown in a striking manner the effects of tropical service upon the efficiency of the Army. In this connection attention is invited to the remarks of the tropical board on page 130 relative to the effects of tropical climates. By reference to Chart H, page 29, it will be observed that Alaska maintained as usual its record of being by far the healthiest region where our troops are stationed.

Admission rates.

Chart C, page 23, shows in a striking way the admission rates for disease and injuries for the American Army from 1819 (the year this office was established as a bureau of the War Department) to 1912, inclusive. By reference to this chart it will be seen that the admission rate for the American Army for 1912 was 823.94, the lowest on record. The rate for disease alone was 674.29, also the lowest recorded. By reference to Chart M, page 42, it will be observed that this rate for disease for the United States, continental, was only 596.94 per 1,000. That for all causes was 738.70 per 1,000. These rates are very much better than any previous corresponding rates for the United States. In the Philippine Islands, however, due especially to an unusual prevalence of malarial fevers, the admission rate for disease in 1912 was higher than the corresponding rate in 1911. The rate for external causes showed a slight decrease. Chart H, page 29, shows in a striking way that the admission rate for the American troops was higher in the Philippine Islands than in any other country where our troops are stationed. It will also be noticed that Alaska had by far the lowest admission rate as well as the lowest noneffective rate.

Discharge for disability.

The good effects of General Order 174, War Department, 1909, continue to be shown in a constantly decreasing rate for discharge on certificates of disability. Not only are some cases found fit or rendered fit for duty by treatment at general hospitals and recruiting depots, where they are sent for discharge, but the fact that a board of medical officers must pass on each case has a deterring effect on post surgeons, who might be inclined in some cases to assist organization commanders to eliminate undesirable men from their organizations who are not really physically disqualified. Chart D, page 25, shows that the rate for discharges for all causes for the total American Army was for 1912 the lowest since the Spanish-American War. By reference to Charts F and N, pages 27 and 43, it will be observed that the same remarks are true for the rate for disease for the American Army and for all causes for the troops stationed in the United States, continental.

Deaths.

While the rate for noneffectiveness, admissions, and discharges have shown a satisfactory improvement from year to year, the death rate has also improved. Chart E, page 26, shows graphically that the death rate for all causes for the Army was lower in 1912 than in any previous year in the history of our Army, other than for the year 1910. However, by reference to Chart F, page 27, it will be seen that the death rate for disease for the American Army was lower in 1912 than in 1910, and was moreover lower than the corresponding rate for any year on record. Chart H, page 29, shows the comparative discharge and death rates for American troops for 1912 in all countries where our troops are stationed.

While the general rates just mentioned for 1912 were very satisfactory, the rates for certain special diseases are especially gratifying.

Typhoid fever.

On page 49 will be found a full discussion of the occurrence of typhoid fever among the American and native troops. Chart P, page 51, shows graphically the more than satisfactory result following the compulsory immunization of the Army by the typhoid prophylactic. In 1912 only

18 cases of this disease occurred in that part of the Army stationed in the United States; of these 18 cases only 6 had received the prophylactic, while 5 of them occurred in recruits who were infected prior to enlistment and were in the incubation stage when enlisted. Three deaths occurred in the United States, none of which were in the cases immunized. Among the American and native troops there were in all 27 cases with 4 deaths in 1912 as compared with 69 cases and 8 deaths in 1911, the results for 1911 being at that time considered more than satisfactory. It appears at the present time that the figures for 1913 will be even more gratifying than those for 1912. At this date, August 30, not a single case has been reported among the enlisted men in the entire Army, American or native troops, since October 27, 1912. One case occurred in a medical officer, December 19, 1912. This officer had had a previous attack of typhoid fever and hence had not received the prophylactic. It seems more than marvelous that among the number of men in the camps at Texas City and Galveston, and among those in the numerous camps along the Mexican border, constantly exposed to infection, not a single case has occurred. During the last few months cases have been reported in several instances among the members of families of officers or enlisted men or other civilians at Army posts without a case occurring among the military personnel.

Venereal diseases.

It is very gratifying to this office to be able to state that as a result of the propaganda of education in the Army, of compulsory prophylaxis, with physical examinations, and of the stoppage of pay by act of Congress of men incapacitated by these diseases for duty, some control has apparently at last been secured over the occurrence of venereal diseases. The order from the War Department prescribing the compulsory prophylaxis with semimonthly physical inspection was published in General Order 17, May 31, 1912. The act of Congress for the stoppage of pay was published by General Order 31, September 12, 1912. Thus only a part of the year was affected by these two measures. However, some beneficial results were obtained before these orders were issued by the actions of division and post commanders upon the recommendation of chief surgeons and post surgeons. The admission rate for the troops stationed in the United States for the year was very satisfactory, being 115.74 per 1,000, as compared with 145.29 per 1,000 in 1911. The rate for the first quarter of 1912 was 130 per 1,000, for the second 113, for the third 107, and for the fourth 91. Thus the beneficial effects of all the measures were shown toward the latter part of the year. The improvement in the noneffective rate was even more marked than that in the admission rate, this being only 5.96 per 1,000 in 1912, as compared with 8.82 for 1911. In the Philippine Islands the admission rate for the white troops showed a satisfactory improvement, but that for the colored troops was unusually high. The rate for the Army as a whole, both for noneffectiveness and admissions, showed a very satisfactory improvement. For the year 1913 the results will apparently be very much more satisfactory than even those for 1912. Thus, for the first six months in 1913 the annual admission rates for these diseases was 74.67 per 1,000. By reference to Chart T, page 65, it will be seen that this is the lowest rate for these diseases since 1895. It should be remarked, in passing, that this rate includes all cases occurring, not only those excused from duty, but also all cases that were treated and recorded but not excused from any duty. Approximately one year after official action was taken by the War Department and by Congress, the admission rate for venereal diseases has been reduced about one-half. The rate in 1911 was 145.29 per 1,000; the annual rate for the first six months of 1913 was 74.67. It is believed that the time has come to hold commanding officers responsible for excessive venereal rates occurring at their posts, and especially for continued failure on the part of the men of the command to comply with the existing orders on the subject. If this were done and if the officers of the Inspector General's Department and the sanitary inspectors had orders to investigate strictly the results obtained at posts inspected by them, and to make special reports in cases where these results are not satisfactory, there is no doubt that a great and permanent improvement could be effected.

Tuberculosis.

While there is as yet no measure that can eradicate tuberculosis from the Army as the typhoid prophylactic has done for typhoid fever, nor control it as effectively as the present system of venereal prophylaxis is apparently controlling the occurrence of this class of disease, yet it is gratifying to be able to report that as the result of improved sanitation and of the care with which applicants for enlistment are examined, that the rate for this disease is steadily diminishing year by year. This is shown on Chart V, page 73.

Malarial fevers.

By reference to Chart U, page 69, it will be seen that the admission rate for malarial fevers in the United States continues to steadily diminish. Chart X, page 103, shows, however, that the admission rate for these fevers in the Philippine Islands was higher than it has been in any year since 1906. A full discussion of this subject will be found on pages 67 and 101.

Alcoholism.

Chart T, page 65, shows that the rate for alcoholism in the United States for 1912 is the lowest since 1873, excepting that for the year 1898, which should be omitted, as it was a year of war, when such rates are usually low. The rate for the American troops in the Philippine Islands also showed a satisfactory decrease. During the year 1913 it is expected that the full benefit of the act of Congress for the stoppage of pay will be manifested and that there will be a still more marked decrease.

Improved camp sanitation.

Finally it is being demonstrated day by day in the camps at Texas City and Galveston that troops properly protected by vaccination against smallpox and typhoid fever can live in camps properly located with the present system of camp sanitation for an indefinite length of time without any increased morbidity among the troops. The system of the disposal of all excreta and garbage in camps is not only very satisfactory but very simple and inexpensive.

Increase of Hospital Corps.

I can not in transmitting this, my last, annual report fail to call your attention to one particular in which the Medical Department is unprepared to fulfill its responsibilities to the Army and the Nation. It is one which has been the subject of frequent communications from this office in the last few years and has been pointed out for several years in the annual reports—this is the great deficiency in number of the Hospital Corps; so that when the tactical divisions of the

Regular Army take the field they can have not more than one-fourth of the sanitary units required for the medical service and called for by the Field Service Regulations. In fact the first division stationed in the Eastern Department has not a single sanitary unit. This matter is discussed quite fully on page 165 et seq. of this report. No action by Congress is necessary to remedy this defect, since Congress, in order that such a deficiency might be avoided, has placed in the hands of the President the responsibility for providing a sufficiently numerous Hospital Corps to care for the sick and wounded, and has specifically stated that they shall not be counted as a part of the strength of the Army. It is believed that Congress has thus shown the intention that our Army shall have an adequate medical service proportioned to its strength, and this is what I have repeatedly urged. It is also believed that if the Secretary would recommend to Congress the reorganization of the Hospital Corps, which is asked for in this report, it will be easily obtained and will much facilitate the recruitment of suitable men for this relatively unattractive service.

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Regular Army take the field they can have not more than one-fourth of the sanitary units required for the medical service and called for by the Field Service Regulations. In fact the first division stationed in the Eastern Department has not a single sanitary unit. This matter is discussed quite fully on page 165 et seq. of this report. No action by Congress is necessary to remedy this defect, since Congress, in order that such a deficiency might be avoided, has placed in the hands of the President the responsibility for providing a sufficiently numerous Hospital Corps to care for the sick and wounded, and has specifically stated that they shall not be counted as a part of the strength of the Army. It is believed that Congress has thus shown the intention that our Army shall have an adequate medical service proportioned to its strength, and this is what I have repeatedly urged. It is also believed that if the Secretary would recommend to Congress the reorganization of the Hospital Corps, which is asked for in this report, it will be easily obtained and will much facilitate the recruitment of suitable men for this relatively unattractive service.

HEALTH OF THE ARMY.

INTERNATIONAL NOMENCLATURE.

This is the first annual report of this office in which the diagnostic terms for diseases and injuries, adopted by the Medical Department in accordance with the International Nomenclature, are used with the international number. The nomenclature was published in C. M. M. D., December 7, 1911, for the information and guidance of all medical officers.

The International Nomenclature is used by most of the important foreign countries. It is also used by the Census Bureau in this country and by an increasing number of boards of health and large hospitals. It is reported that it will also be adopted by the American Medical Association.

In studying statistics for other countries, where the terms used are expressed in a foreign language, the International number furnish a ready key for their interpretation.

On page 286 and following will be found 10 tables giving the military statistics for the year 1912, as agreed upon at the International Commission for the Unification of the Medical Statistics of Armies, held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting held at Berlin in 1907. The diagnostic terms and numbers used in these tables are those agreed upon by the commission, and are not to be confused with the terms and number of the International Nomenclature used in the remainder of this report and based upon the second decennial revision by the international commission held in Paris, July 1 to 3, 1909.

ADMISSION RATES.

Prior to 1904 in compiling the statistics of this office for the Army all readmissions which were obviously for the same attack of the same disease were omitted. Thus if a man was admitted to hospital with a complication of gonorrhea, who had been returned to duty a short time before, after treatment for the same attack of this disease the readmission was not counted. From 1904 to 1911, inclusive (reports 1905–1912), all admissions were counted. In compiling the statistics for 1912 the rule followed prior to 1904 has been followed. In each report recently a table has been published showing for the Army the difference between the actual number of cases and admissions. In this report in making comparisons between cases and admissions the terms case admission (report 1913 and prior to the one for 1905) and total admission (reports 1905 to 1912, inclusive) will be used.

Table No. 81, page 285, shows the total admissions and case admission rates for the Army, for the United States, continental (exclusive of Alaska), and for American troops in the Philippine Islands for diseases, external causes, and all causes separately for each year, 1904 to 1911, inclusive.

OFFICERS.

The mean strength of officers was 4,216, as obtained from the reports of sick and wounded of the Medical Department, and 4,690 from the office of The Adjutant General. There were 2,516 admissions, 24 deaths, and 105.08 constantly noneffective from all causes, equal to ratios of 596.78, 5.12, and 24.92 as compared with ratios of 596.92, 4.43, and 26.91 per 1,000 for the year 1911. The constantly noneffective rate was lower than for 1911, the admission rate slightly lower, and the death rate higher.

The principal causes of admission in the order of their importance were bronchitis, 42.93; diseases of the pharynx, 38.19; influenza, 37.95; diarrhea and enteritis, 35.82; diseases of the nasal fossæ, 29.89; malarial fevers, 25.14; diseases of the stomach (cancer excepted), 20.87; and dengue, 19.21 per 1,000.

OFFICERS RETIRED.

Twenty-two officers were retired on account of disability during the year, making a rate for retirement for disability of 4.69 per 1,000, as compared with 6.64 for 1911. The discharge rate for disability in enlisted men was 13.43.

The following table shows the principal causes for which retirement were made and the rank and age of the officers retired:

Table No. 1.—*Retirement of officers, United States Army, year 1912, for disability, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF RETIREMENT.											
Organic disease of heart	4	.85					1		2	1	
Deafness	3	.64						2	1		
Dysentery, amœbic	2	.43						1	1		
Tuberculosis, pulmonary	2	.43		1	1						
Paresis	2	.43					2				
Neurasthenia	2	.43				1	1				
Nephritis, chronic interstitial	2	.43						1		1	
Rheumatism, chronic articular	1	.21							1		
Arterio-sclerosis, general	1	.21									1
Cataract, both eyes	1	.21							1		
Inguinal hernia, bilateral	1	.21				1					
Fracture, leg	1	.21				1					
RANK IN SERVICE.											
Colonel	2	.43								2	
Lieutenant colonel	4	.85						2	2		
Major	2	.43							1		1
Captain	10	2.13			1	2	4	2	1		
First lieutenant	1	.21				1					
Second lieutenant	1	.21		1							
Chaplain	2	.43							2		
Number of retirements	22	4.69		1	1	3	4	4	6	2	1
Number of officers in service	4,690		288	951	960	1,064	630	368	215	142	72
Ration per 1,000 of each group				1.05	1.04	2.82	6.35	10.87	27.91	14.08	13.89

There were 24 deaths with a rate of 5.12 per 1,000, as compared with 20 deaths with a rate of 4.43 in 1911.

The following table shows the causes of deaths of officers:

TABLE No. 2.—*Deaths of officers, United States Army, year 1912, by causes and rank, grouped by ages.*

	Total.		Ages of officers, quinquennial groups.								
	Number.	Ratio per 1,000 of all officers.	24 years and under.	25 to 29 years.	30 to 34 years.	35 to 39 years.	40 to 44 years.	45 to 49 years.	50 to 54 years.	55 to 59 years.	60 years and over.
CAUSES OF DEATH.											
Bright's disease	3	.64							1	2	
Organic disease of heart	2	.43						1		1	
Pneumonia	2	.43			1						1
Appendicitis	2	.43			1	1					
Gunshot wounds, suicidal	2	.43			1		1				
Crushing, by fall of aeroplane	2	.43		2							
Typhoid fever	1	.21					1				
Tuberculosis, pulmonary	1	.21						1			
Sarcoma of liver	1	.21						1			
Cancer of esophagus	1	.21									1
Diabetes	1	.21									1
Alcoholism, chronic	1	.21				1					
Embolism, cerebral	1	.21								1	
Sprue, chronic	1	.21								1	
Incised wounds by hostile Moros	1	.21				1					
Drowned at sea	1	.21						1			
Fracture of skull, fall from horse	1	.21		1							
RANK IN SERVICE.											
Brigadier general	1	.21								1	
Colonel	5	1.07								3	2
Lieutenant colonel	1	.21								1	
Major	6	1.28					1	3	1		1
Captain	3	.64				3					
First lieutenant	2	.43			2						
Second lieutenant	3	.64		3							
Chaplain	3	.64			1		1	1			
Number of deaths	24	5.12		3	3	3	2	4	1	5	3
Number of officers in service	4,690		288	951	960	1,064	630	368	215	142	72
Death rate per 1,000 of each group				3.15	3.13	2.82	3.17	10.87	4.65	35.21	41.67

TEST EXERCISES FOR FIELD OFFICERS.

Of the officers of field rank who were subject to the annual physical test, 7 were excused in 1912; in all 7 cases the disability was regarded as permanent.

ENLISTED MEN.

The mean enlisted strength of the Army, American troops, white and colored, for the year 1912, as reported on the monthly sick reports of the Medical Department, was 78,267, and on the returns of The Adjutant General's Office, 79,613. The former represents the strength of the commands from which the sick returns were made and was used in calculating all ratios except those for deaths and discharges. As all deaths and discharges were reported, even of those absent from a command, the total strength as obtained from The Adjutant General was used in calculating ratios pertaining to those headings. There was an increase in strength over the year 1911, for which the medical returns showed 72,748 and The Adjutant General's Office, 73,023.

During the year 1912 American troops were stationed in the United States proper, the Philippine Islands, China, Alaska, Hawaii, and the Canal Zone. Native troops served in Porto Rico and the Philippines.

Statistics for the native troops, Porto Rican and Philippine, have been separately compiled, and when reference is made to the "Army" in this report the American Army proper, white and colored troops, exclusive of native troops, is meant.

Charts, A, C, D, and E, were prepared in this office for the exhibit at the Fifteenth International Congress of Hygiene and Demography. They have been brought up to date and are published in this report so that they may be on permanent record. The corresponding historical table was published in the last report of this office, pages 14, 15, and 16, report 1912.

CONSTANTLY NONEFFECTIVE RATE.

Chart A shows the constant noneffective rate for all causes from the year 1867 to 1912, inclusive. This rate is the true measure of the loss in efficiency of the Army from sickness and injury. The rate for disease and injury obtained for the total American Army for the year 1912 was 30.10, as compared with 33.28 per 1,000 in 1911. The rate for 1912 is thus much lower than the rate for 1911, which was the lowest recorded noneffective rate in the history of the Army before the year 1912. In only two previous years has the noneffective rate for all causes been below 34. These years were 1895 and 1896, when the rates were 33.89 and 33.97, respectively.

Chart B, giving the total noneffective rate for diseases for the last 20 years, shows in a striking way the increase in sickness due to exposure to tropical climates, a condition subsequent upon the occupation of new territory during and since the Spanish-American War. It also shows a steady diminution in sickness after the first year of colonial expansion in 1898 with the steady advance in our knowledge of tropical disease and preventive medicine and the establishment of more sanitary conditions of living in our tropical possessions. It will be seen by reference to this chart that the rate for 1912 was exactly the same as for 1895, 25.43, and only slightly higher than the rate for 1896, which was 25.23. This noneffective rate for disease for 1896 is the lowest on record in the Army. The corresponding rate for 1911 was 28.23. The highest noneffective rate on record was for the year 1898, when the total rate was 82.83 per 1,000 and the rate for diseases alone was 69.09. The progressive improvement from 1898 to 1911 was chiefly due to the sanitary control of infectious diseases, malarial fevers, typhoid, and dysentery. The very marked improvement in 1912 was due, largely, to the sanitary control of two diseases, typhoid fever and venereal diseases. As a result of the control of typhoid fever by immunization of the Army by the typhoid prophylactic and by the employment of proper sanitary measures, this disease ceases, apparently, to be a factor worthy of consideration as far as noneffectiveness in the Army is concerned. The noneffective rate for venereal diseases showed a very material reduction in 1912; this was a result of the propaganda of education which has been going on for several years and of General Order 17, War Department, May 31, 1912, prescribing a compulsory system of venereal prophylaxis and

Chart A.

Noneffective Rates, All Causes, for the Army, years, 1867-1912.

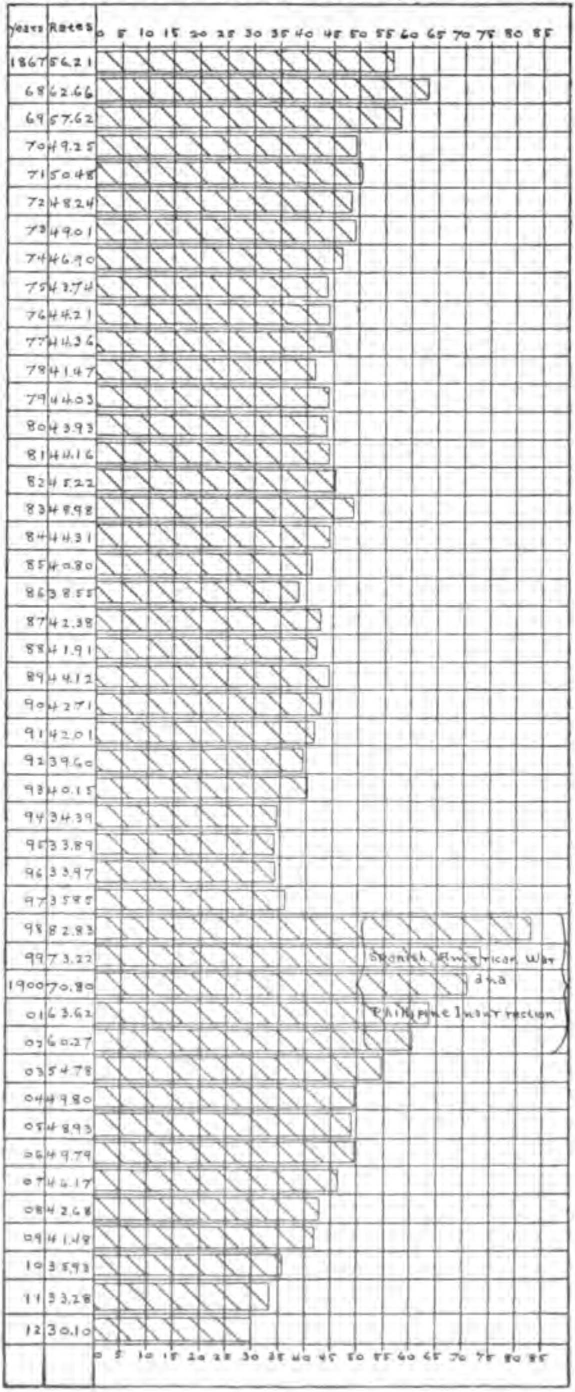
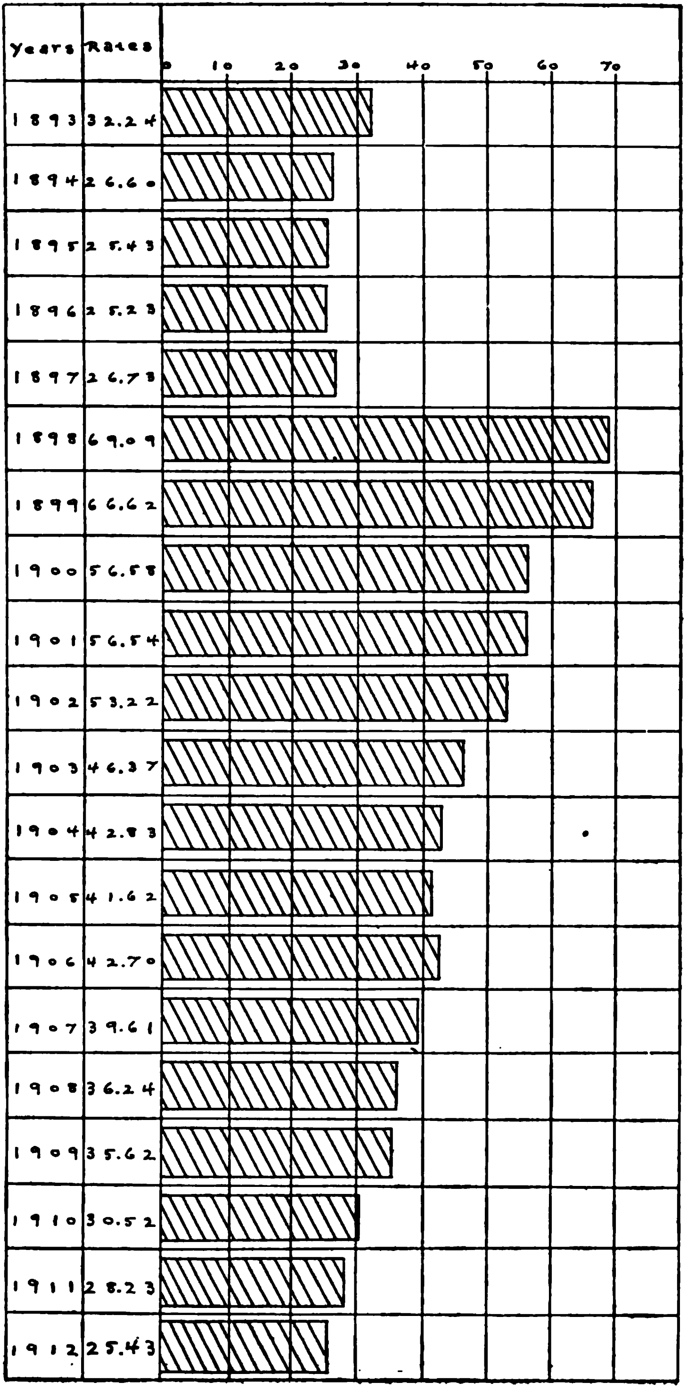


Chart B.

Noneffective Rates for Disease for the Army, American Troops {Enlisted Men} years 1893-1912.



physical inspection, together with General Order 31, publishing to the Army the action of Congress in stopping the pay of men disabled on account of sickness due to alcoholism, drug addiction, and other misconduct (venereal diseases).

The diseases causing the highest noneffective rates were venereal diseases and tuberculosis (all). The rate for venereal diseases was 7.78 per 1,000 and that for tuberculosis (all) was 1.40. The noneffective rate for venereal diseases in 1911 was 10.14, and in 1910, 11.51. The rate for 1912, therefore, as stated above, shows a marked reduction. This rate would have been further decreased but for the enormous increase among the colored troops serving in the Philippine Islands, the noneffective rate there for these troops being 21.70 per 1,000 for venereal diseases alone. There were no colored troops serving in the Philippine Islands in 1910 and 1911. The total noneffective rate for venereal diseases for all colored troops in 1910 was 8.33; in 1911, 7.12, and in 1912, 11.11, while on the other hand, the total noneffective rate for white troops in 1910 was 11.65; in 1911, 10.27; and in 1912, 7.61.

ADMISSIONS TO SICK REPORT.

Chart C, giving the admissions to sick report for the Army since the year 1819, when the Office of the Surgeon General was first established as a bureau of the War Department, shows in a striking way the gradual decrease in the number sick or injured in the service. The case admission rate for all causes for the Army for 1912 was 823.94. By reference to the chart it will be seen that this is the lowest admission rate in the history of the Army. The highest admission rate on record for the Army was in 1841, when the total rate for all causes was 3,846.8, that for disease alone being 3,475.1.

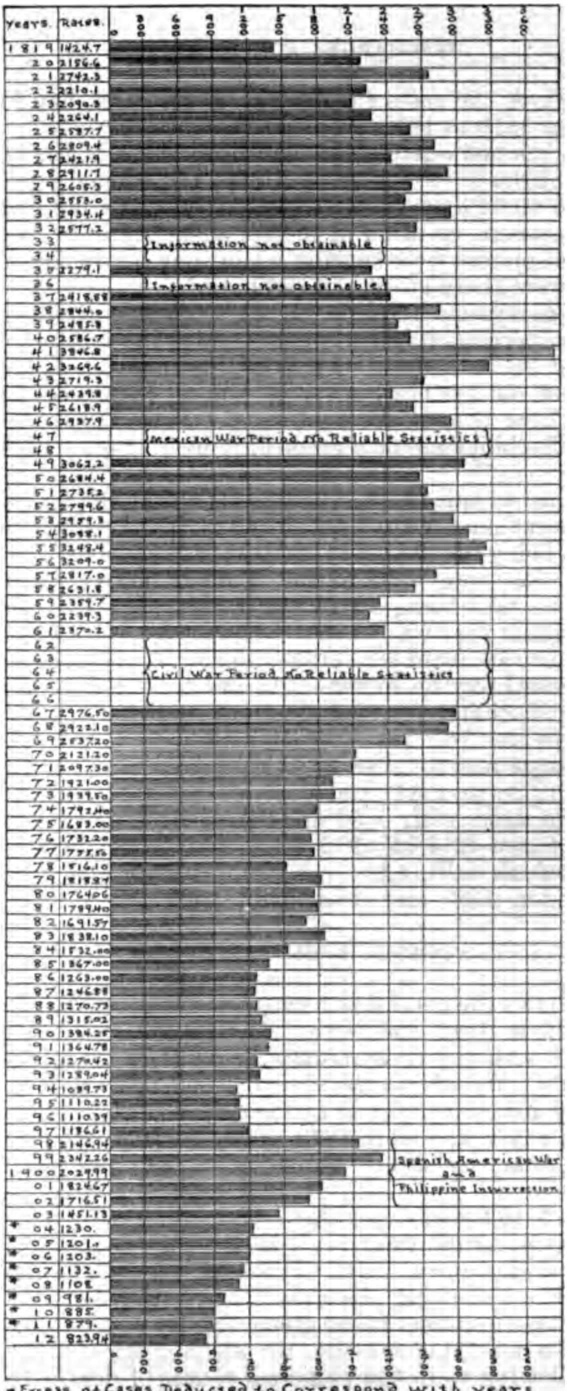
The case admission rate for disease for the Army for 1912 was 674.29. The corresponding rate was 717 for 1911 and 787 for 1910. The rate for 1912 was the lowest admission rate for disease in the history of the Army. Table No. 81 shows the case admission and total admission rates for the Army, United States, and American troops, Philippine Islands, 1904 to 1911, inclusive.

The diseases causing the highest admission rate were as follows, in the order named: Venereal diseases, 136.70; diseases of the pharynx, 65.33; malarial fevers, 40; bronchitis, 34.89. The venereal rate in 1911 was for all troops 185.13, that for white being 187.08 and that for colored 139.91. In 1910 the total venereal rate was 174.95, that for white being 175.16, that for colored 170.13. In 1912 the rate for the white troops was 130.79, colored 249.42. This increase in the rate for the colored troops was due, as stated before, to the enormous increase in the prevalence of venereal diseases among the colored troops serving in the Philippine Islands, the case admission rate for these troops being 524.06 per 1,000, which is believed to be probably the highest admission rate for venereal diseases for either white or colored troops in the history of the Army. The reason for this alarming increase is not apparent.

The case admission rate for external causes was 149.64. The corresponding rate was 161 for 1911 and 178 for 1910. The following were the principal causes, with ratios per 1,000: Traumatism by fall 48.23; injuries by animals, 14.67; traumatism by cutting or piercing instruments, 12.02; poisoning by food, 3.74; burns, 2.50; effects of

Chart C

Admission Rates, All Causes, for the Army, years, 1819-1912.



* Excess of Cases Deducted to Correspond with years Preceding 1904, and 1912.

heat, 2.21, and traumatism by firearms, 2.02. Eight men were shot by sentry, with 4 deaths. Two were wounded in action without a death.

DISCHARGES FOR DISABILITY.

Chart D gives the rates for discharges for disability for the Army from the year 1819 to 1912, inclusive.

Soldiers stationed outside the territorial limits of the United States are now brought to the United States for discharge, except those belonging to the Porto Rican regiment and the Philippine Scouts. They are, however, credited in the tabulated reports to the country in which the soldiers were serving when they became disabled if their commands were there at date of discharge.

The present system requires that all soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers at a recruit depot or general hospital before being discharged. The reports of these boards are sent to the War Department and discharges for disability are now made only by authority of the Secretary of War.

By reference to this chart it will be seen that the disability rate for 1912 was lower than for any year since the Spanish-American War, the lowest rates being for the years 1894–1898, inclusive, and for the year 1867. In 1912 there were in the Army 1,069 men discharged for disability, the rate being 13.43 per 1,000. The corresponding rate for the preceding year was 13.85. The rate for 1867 was 13 per 1,000, and the lowest rate from 1894–1898, inclusive, was that for 1895—the lowest on record for the Army—9.15 per 1,000. The highest rate in any year for discharge for disability was in 1849, when the total rate for discharges was 76.7 per 1,000.

The discharge rate for disease in 1912 was 12.18 per 1,000, as compared with 12.28 in 1911, and that for external causes was 1.24 in 1912, as compared with 1.56 in 1911. The diseases causing the highest discharge rate in 1912 were as follows: Mental alienation, 2.64; tuberculosis (all), 1.56; venereal diseases, 1.26; diseases of the urinary bladder, 0.38; and alcoholism, 0.33.

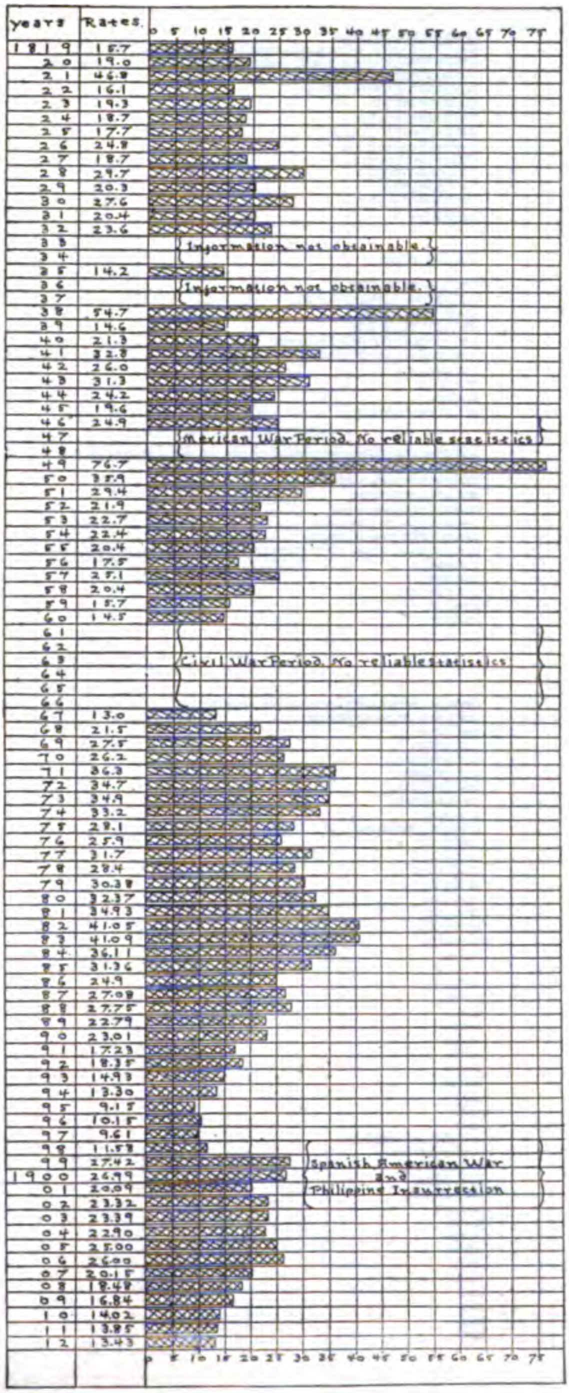
DEATHS FROM ALL CAUSES.

Chart E shows the total death rate for all causes for the Army from the year 1819 to 1912, inclusive. The total rate for 1912 was 4.79, as compared with the corresponding rate of 4.77 for 1911, and 4.46 for 1910. By reference to the chart, it will be seen that the rate for 1910 was the lowest on record in the Army. The highest death rate occurring in any year was in 1849, when the total rate for deaths was 80.2. This year, as stated above, also had the highest rate for discharges.

The death rate for diseases was 2.37 in 1912, which was the lowest on record in the Army, the next lowest being the rate in 1910, which was for the same causes, 2.44. The total number of deaths in 1912 was 381. The following diseases caused the highest number of deaths, absolute numbers being given: Tuberculosis (all), 25; organic diseases of the heart, 14; measles, 13; alcoholism, 12; and pneumonia, 12. The following were the principal causes of deaths from external

Chart D.

Discharge Rates, All Causes, for the Army, years, 1819-1912



years	Rates.
1819	15.7
20	19.0
21	46.8
22	16.1
23	19.3
24	18.7
25	17.7
26	24.8
27	18.7
28	29.7
29	20.3
30	27.6
31	20.4
32	23.6
33	
34	
35	14.2
36	
37	
38	54.7
39	14.6
40	21.3
41	32.8
42	26.0
43	31.3
44	24.2
45	19.6
46	24.9
47	
48	
49	76.7
50	35.9
51	29.4
52	21.9
53	22.7
54	22.4
55	20.4
56	17.5
57	25.1
58	20.4
59	15.7
60	14.5
61	
62	
63	
64	
65	
66	
67	13.0
68	21.5
69	27.5
70	26.2
71	36.3
72	34.7
73	34.9
74	33.2
75	28.1
76	25.9
77	31.7
78	28.4
79	30.38
80	32.37
81	34.93
82	41.05
83	41.09
84	36.11
85	31.36
86	24.9
87	27.08
88	27.75
89	22.79
90	23.01
91	17.23
92	18.35
93	14.93
94	13.30
95	9.15
96	10.15
97	9.61
98	11.58
99	27.42
1900	26.99
01	20.09
02	23.32
03	23.39
04	22.90
05	25.00
06	26.00
07	20.15
08	18.48
09	16.84
10	14.02
11	13.85
12	13.43

Chart E.

Death Rates, All Causes, for the Army, years, 1819-1912.

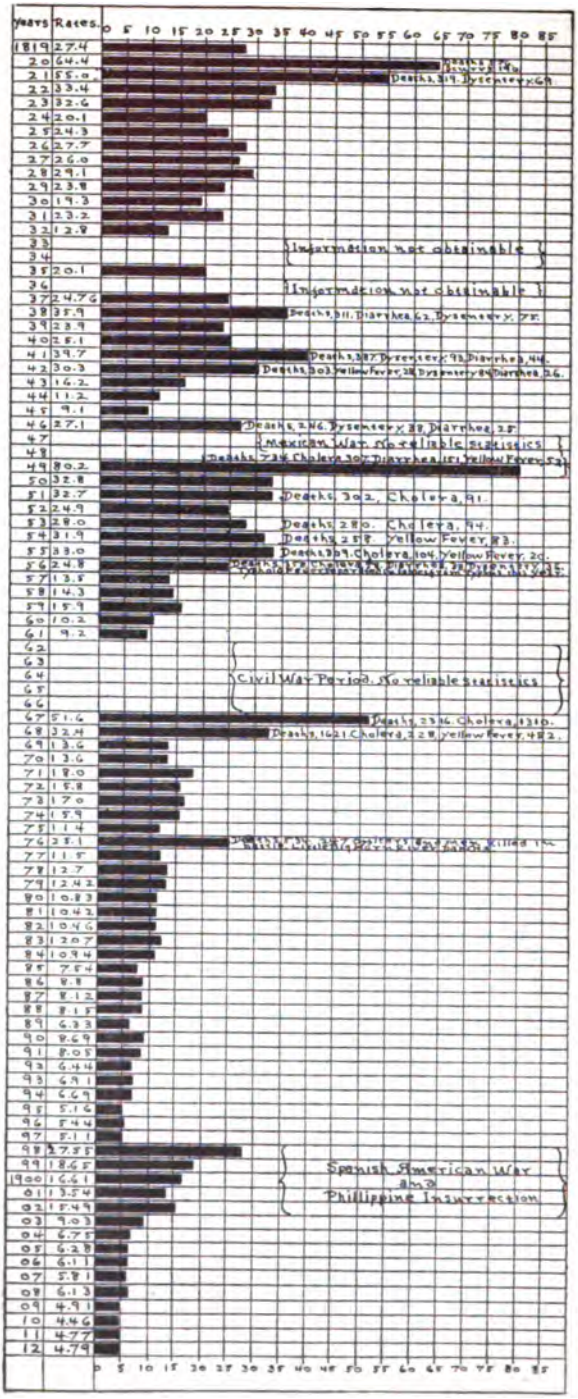
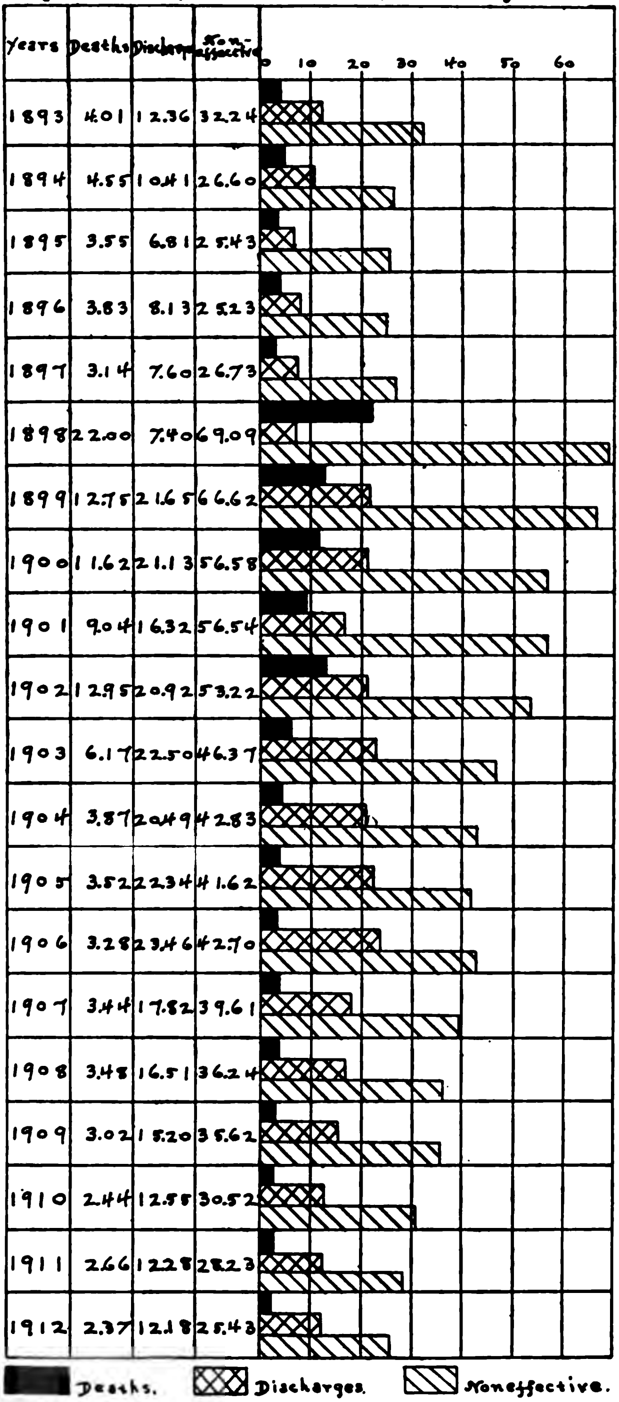


Chart F.

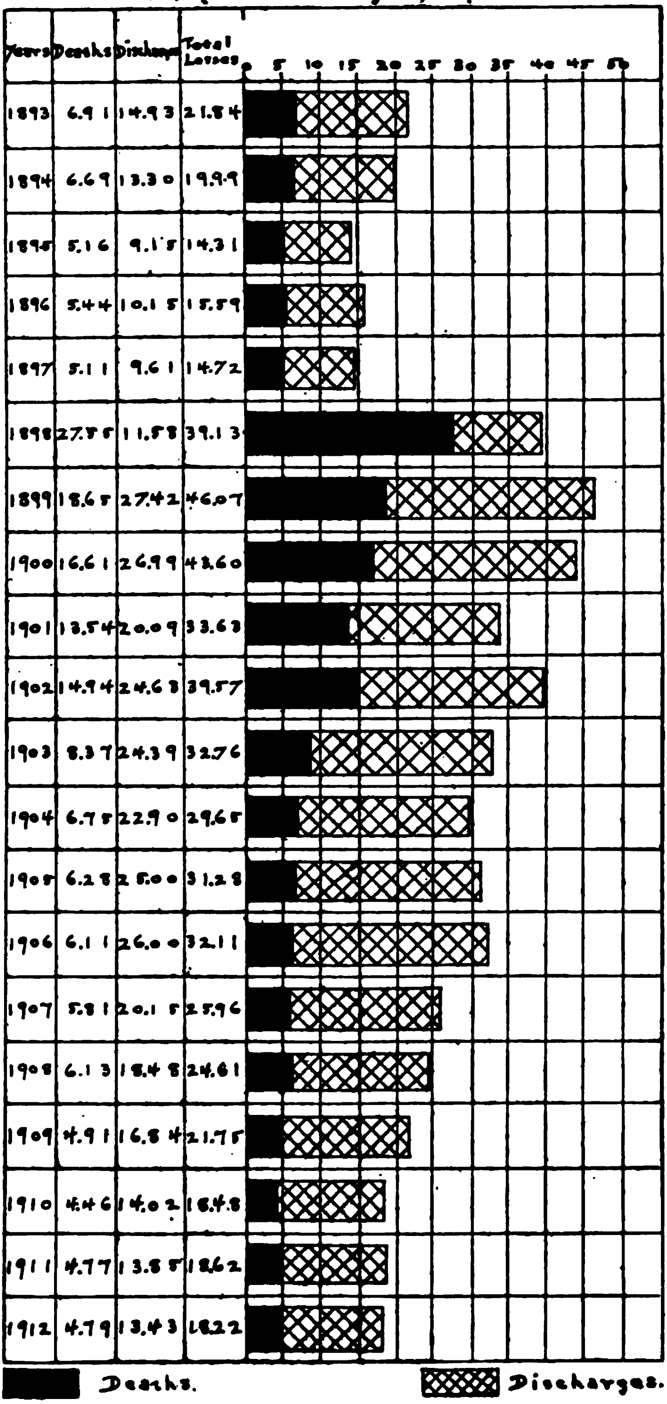
Death, Discharge and Noneffective Rates for Disease for the Army, American Troops {Enlisted Men} 1893-1912.



Years	Deaths	Discharges	Non-effective
1893	4.01	12.36	32.24
1894	4.55	10.41	26.60
1895	3.55	6.81	25.43
1896	3.83	8.13	25.23
1897	3.14	7.60	26.73
1898	22.00	7.40	69.09
1899	12.75	21.65	66.62
1900	11.62	21.13	56.58
1901	9.04	16.32	56.54
1902	12.95	20.92	53.22
1903	6.17	22.50	46.37
1904	3.87	20.49	42.83
1905	3.52	22.34	41.62
1906	3.28	23.46	42.70
1907	3.44	17.82	39.61
1908	3.48	16.51	36.24
1909	3.02	15.20	35.62
1910	2.44	12.55	30.52
1911	2.66	12.28	28.23
1912	2.37	12.18	25.43

Chart G.

Total Losses, All Causes, for the Army, American Troops (Enlisted Men) 1893-1912.

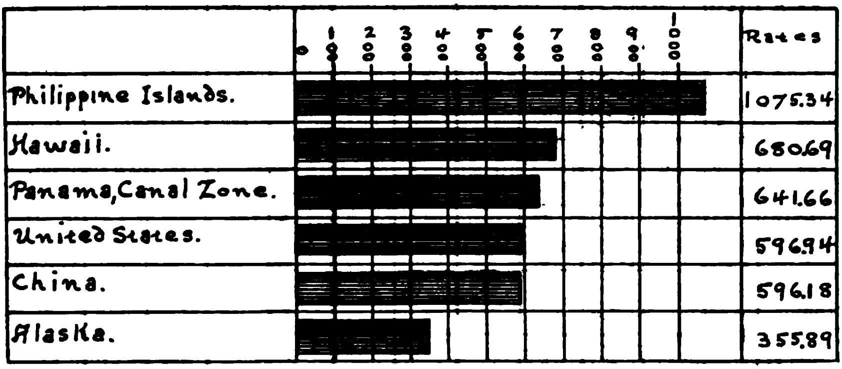


Years	Deaths	Discharges	Total Losses
1893	6.91	14.93	21.84
1894	6.69	13.30	19.99
1895	5.16	9.15	14.31
1896	5.44	10.15	15.59
1897	5.11	9.61	14.72
1898	27.55	11.58	39.13
1899	18.65	27.42	46.07
1900	16.61	26.99	43.60
1901	13.54	20.09	33.63
1902	14.94	24.63	39.57
1903	8.37	24.39	32.76
1904	6.75	22.90	29.65
1905	6.28	25.00	31.28
1906	6.11	26.00	32.11
1907	5.81	20.15	25.96
1908	6.13	18.48	24.61
1909	4.91	16.84	21.75
1910	4.46	14.02	18.48
1911	4.77	13.85	18.62
1912	4.79	13.43	18.22

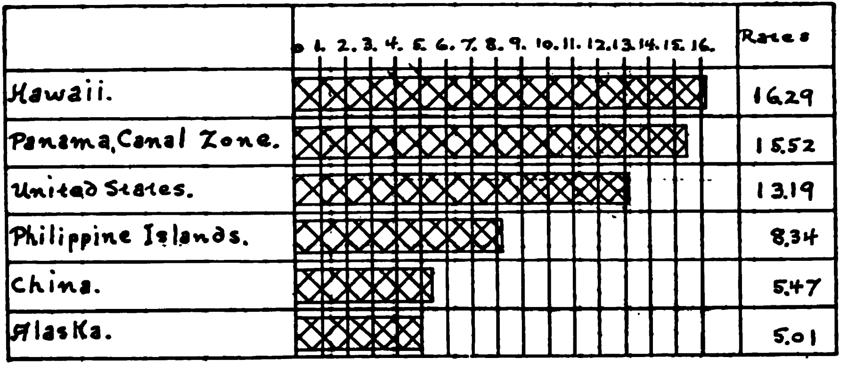
Chart H.

Admission, Discharge, Death and Noneffective Rates, by Countries, American Troops {Enlisted Men} year, 1912.

Admissions.



Discharges.



Deaths

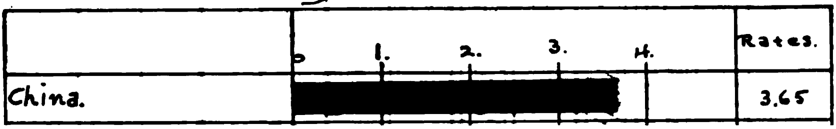
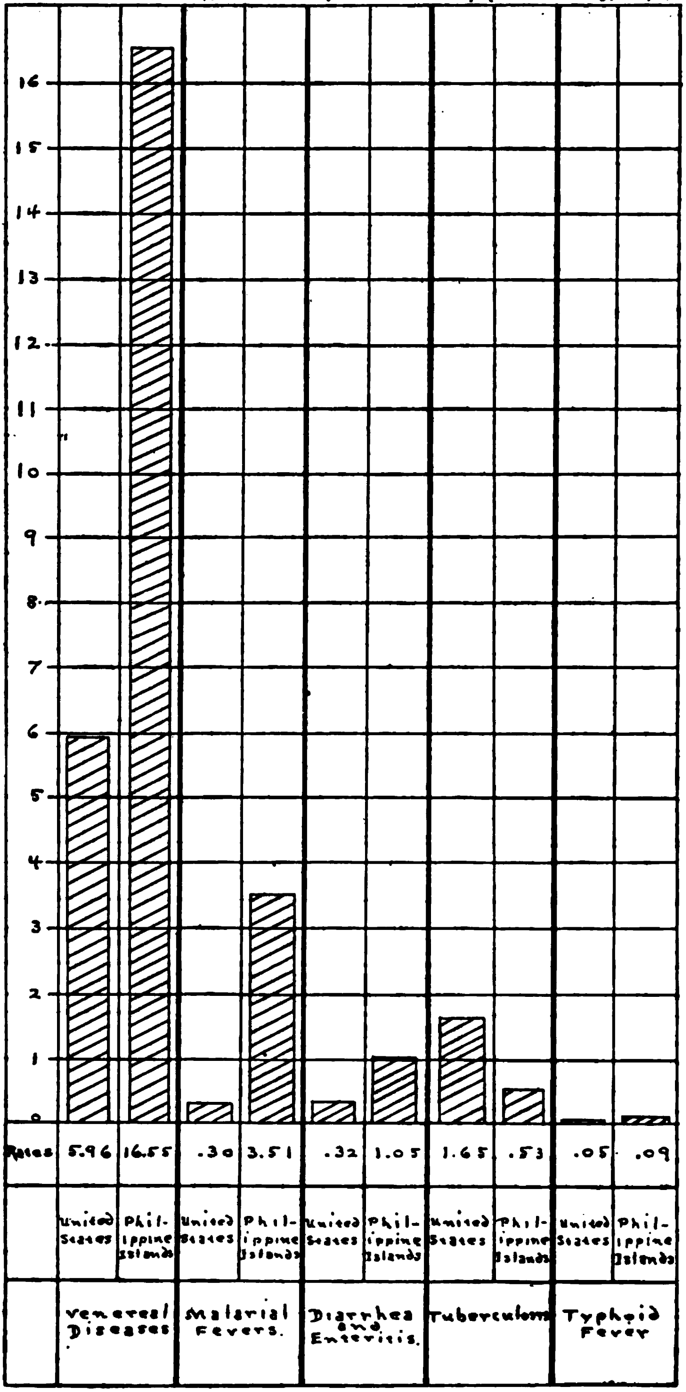


Chart I

Noneffective Rates for certain Special Diseases for the United States & Philippine Islands, American Troops (Enlisted Men) year, 1912



causes: Suicides, 54; drowning, accidental, 43; traumatisms by crushings, 26; homicides, 20; deaths by fire arms, 15; and traumatisms by falls, 14.

INFLUENCE OF STATION ON TROOPS.

Regarding the comparative healthfulness of the various countries in which troops were serving during the year (Army transports being excluded) it will be noted in Table No. 3 that Alaska had, as usual, the lowest admission, discharge, and noneffective rates; Hawaii had the lowest death rate, the highest discharge rate, the second highest admission and noneffective rates; the Philippines had the highest admission and noneffective rates; China had the second lowest admission, discharge, and noneffective rates, and the second highest death rate; the Canal Zone had the highest death rate; and the United States had the second highest discharge rate and the second lowest death rate.

TABLE No. 3.—*Numerical view of the effect of disease and injury on United States troops, serving at home and abroad, in the year 1912, compared with corresponding data for the year 1911, by countries (enlisted men only).*

ABSOLUTE NUMBERS.

American troops (enlisted men).	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Nonaffective from sickness.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly non-effective.
United States 1912	58,374	43,121	34,846	8,275	865	788	77	272	136	136	1,137	924	213	579,892	1,584.40
1911	55,240	49,042	40,095	8,947	833	736	97	262	157	105	1,095	893	202	633,063	1,734.42
Alaska 1912	1,197	612	426	186	6	6	....	7	4	3	13	10	3	7,114	19.44
1911	1,119	468	316	152	5	3	2	7	6	1	12	9	3	5,369	14.47
Philippine Islands 1912	12,357	15,409	13,288	2,121	119	103	16	67	37	30	186	140	46	202,321	552.79
1911	12,454	15,172	12,798	2,374	145	131	14	66	24	42	211	155	56	196,140	537.37
China 1912	1,097	765	654	111	6	6	....	8	4	4	14	10	4	10,442	28.53
1911	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hawaii 1912	3,376	3,161	2,298	863	61	55	6	13	3	10	74	58	16	41,323	112.90
1911	2,014	2,176	1,629	547	28	27	1	6	2	4	34	29	5	32,726	89.66
Canal Zone 1912	773	616	496	120	12	12	....	7	1	6	19	13	6	7,848	21.44
1911	204	192	167	25	....	....	....	1	....	1	1	....	1	1,909	5.23
Army transports 1912	1,093	803	767	36	....	....	....	7	4	3	7	4	3	13,281	36.29
1911	1,700	1,018	966	52	....	....	....	6	5	1	6	5	1	14,414	39.49
Total 1912	78,267	64,487	52,775	11,712	1,069	970	99	381	189	192	1,450	1,159	291	862,221	2,355.80
1911	72,748	68,073	55,975	12,098	1,011	897	114	348	194	154	1,359	1,091	268	883,646	2,420.95
Regular Army, American troops, 1902 to 1911	65,831	820,477	682,639	137,838	13,473	12,071	1,402	4,783	3,142	1,641	18,256	15,213	3,043	11,113,936	3,043.25
Porto Rico regiment 1912	588	672	610	62	4	4	....	2	....	2	6	4	2	6,042	16.51
1911	580	609	562	47	5	4	1	4	2	2	9	6	3	6,304	17.27
Philippine Scouts 1912	5,407	3,667	3,337	330	45	38	7	24	17	7	69	55	14	40,210	109.86
1911	5,266	3,922	3,510	412	26	23	3	24	17	7	50	40	10	38,172	104.58

Table No. 3.- *Numerical view of the effect of disease and injury on United States troops, serving at home and abroad, in the year 1912, compared with corresponding data for the year 1911, by countries (enlisted men only)*—Continued.

PROPORTIONATE NUMBERS.

American troops (enlisted men.)		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly non-effective.	Days treated.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States	1912..	58,374	738.70	596.94	141.76	14.48	12.19	1.29	4.56	2.28	2.28	19.03	15.47	3.57	27.15	9.93	13.45
	1911..	55,240	887.80	725.83	161.97	15.00	13.26	1.75	4.72	2.83	1.89	19.72	16.09	3.64	31.40	11.46	12.91
Alaska	1912..	1,197	511.28	355.89	155.39	5.01	5.01	....	5.85	3.34	2.51	10.86	8.35	2.51	16.24	5.94	11.62
	1911..	1,119	418.23	282.40	135.84	4.47	2.68	1.79	6.25	5.36	.89	10.73	8.04	2.68	13.15	4.79	11.47
Philippine Islands	1912..	12,357	1,246.99	1,075.34	171.64	9.63	8.34	1.29	5.42	2.99	2.43	15.05	11.33	3.72	44.74	16.37	13.13
	1911..	12,454	1,218.24	1,027.62	190.62	11.64	10.52	1.12	5.30	1.93	3.37	16.94	12.45	4.49	43.15	15.75	12.93
China	1912..	1.097	697.36	596.18	101.19	5.47	5.47	....	7.29	3.65	3.65	12.76	9.12	3.65	26.01	9.52	13.65
	1911..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hawaii	1912..	3.376	936.32	680.69	255.63	18.07	16.29	1.78	3.85	.89	2.96	21.92	17.18	4.74	33.44	12.24	13.08
	1911..	2.014	1,080.44	808.84	271.60	13.90	13.41	.50	2.98	.99	1.99	16.88	14.40	2.49	44.52	16.25	15.04
Canal Zone	1912..	773	796.90	641.66	155.24	15.52	15.52	....	9.06	1.29	7.76	24.58	16.81	7.76	27.74	10.15	12.74
	1911..	204	941.18	818.63	122.55	....	....	....	4.90	....	4.90	4.90	....	4.90	25.64	9.36	9.94
Army transports	1912..	1.093	734.68	701.74	32.94	....	....	....	6.40	3.66	2.74	6.40	3.66	2.74	33.20	12.15	16.54
	1911..	1.700	598.83	568.24	30.59	....	....	....	3.53	2.94	.59	3.53	2.94	.59	23.23	8.48	14.16
Total	1912..	78,267	823. 4	674.39	149.64	13.43	12.18	1.24	4.79	2.37	2.41	18.21	14.55	3.65	30.99	11.02	13.37
	1911..	72,748	935.74	769.44	166.30	13.85	12.28	1.56	4.77	2.66	2.11	18.62	14.94	3.67	33.28	12.15	12.98
Regular Army, American troops, 1902 to 1911		65,831	1,246.33	1,036.95	209.38	20.16	18.06	2.10	7.16	4.70	2.46	27.32	22.76	4.56	46.23	16.88	13.55
Porto Rican regiment	1912..	588	1,142.86	1,037.41	105.44	6.80	6.80	....	3.40	....	3.40	10.20	6.80	3.40	17.47	10.28	8.99
	1911..	580	1,050.00	968.97	81.03	8.62	6.90	1.72	6.90	3.45	3.45	15.52	10.35	5.17	29.78	10.87	10.35
Philippine Scouts	1912..	5,407	678.20	617.16	61.04	8.19	6.92	1.27	4.37	3.09	1.27	12.56	10.01	2.54	20.32	7.44	10.96
	1911..	5,266	744.78	666.54	78.24	4.94	4.37	.57	4.56	3.23	1.33	9.50	7.60	1.90	19.86	7.25	9.73

TABLE NO. 3.—*Numerical view of the effect of disease and injury on United States troops, serving at home and abroad, in the year 1912, compared with corresponding data for the year 1911, by countries (enlisted men only).*

ABSOLUTE NUMBERS.

American troops (enlisted men).		Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
			Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly non-effective.
United States	1912..	58,374	43,121	34,846	8,275	865	788	77	272	136	136	1,137	924	213	579,892	1,584.40
	1911..	55,240	49,042	40,095	8,947	833	736	97	262	157	105	1,095	893	202	633,063	1,734.42
Alaska	1912..	1,197	612	426	186	6	6	....	7	4	3	13	10	3	7,114	19.44
	1911..	1,119	468	316	152	5	3	2	7	6	1	12	9	3	5,369	14.47
Philippine Islands	1912..	12,357	15,409	13,288	2,121	119	103	16	67	37	30	186	140	46	202,321	552.79
	1911..	12,454	15,172	12,798	2,374	145	131	14	66	24	42	211	155	56	196,140	537.37
China	1912..	1,097	765	654	111	6	6	....	8	4	4	14	10	4	10,442	28.53
	1911..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hawaii	1912..	3,376	3,161	2,298	863	61	55	6	13	3	10	74	58	16	41,323	112.90
	1911..	2,014	2,176	1,629	547	28	27	1	6	2	4	34	29	5	32,726	89.66
Canal Zone	1912..	773	616	496	120	12	12	....	7	1	6	19	13	6	7,848	21.44
	1911..	204	192	167	25	....	....	....	1	....	1	1	....	1	1,909	5.23
Army transports	1912..	1,093	803	767	36	....	....	....	7	4	3	7	4	3	13,281	36.29
	1911..	1,700	1,018	966	52	....	....	....	6	5	1	6	5	1	14,414	39.49
Total	1912..	78,267	64,487	52,775	11,712	1,069	970	99	381	189	192	1,450	1,159	291	862,221	2,355.80
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Porto Rico regiment	1912..	588	672	610	62	4	4	....	2	....	2	6	4	2	6,042	16.51
	1911..	580	609	562	47	5	4	1	4	2	2	9	6	3	6,304	17.27
Philippine Scouts	1912..	5,407	3,667	3,337	330	45	38	7	24	17	7	69	55	14	40,210	109.86
	1911..	5,266	3,922	3,510	412	26	23	3	24	17	7	50	40	10	38,172	104.58

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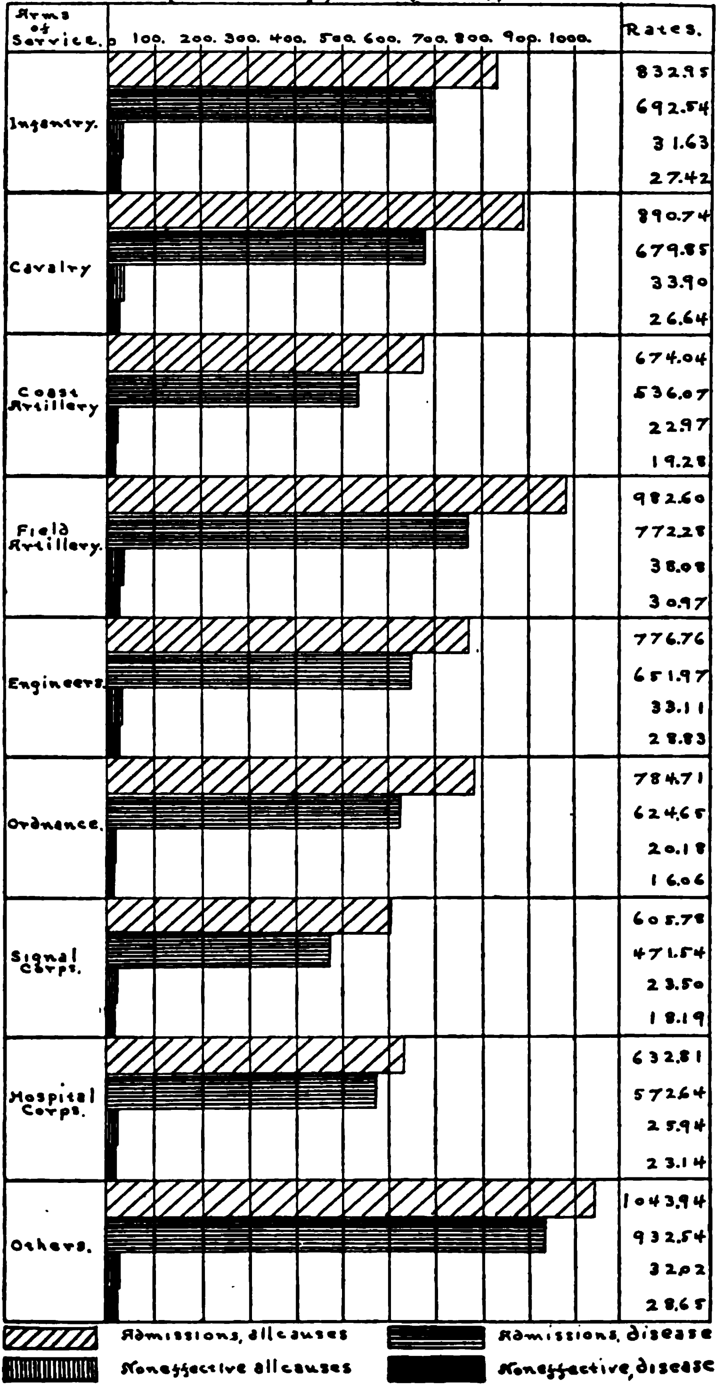
PROPORTIONATE NUMBERS.

American troops (enlisted men.)	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly non-effective.	Days treated.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
United States 1912	58,374	738.70	596.94	141.76	14.48	13.19	1.29	4.55	2.28	2.28	19.03	15.47	3.57	27.15	9.93	13.45
1911	55,240	887.80	725.83	161.97	15.00	13.26	1.75	4.72	2.83	1.89	19.72	16.09	3.64	31.40	11.46	12.91
Alaska 1912	1,197	511.28	355.89	155.39	5.01	5.01	....	5.85	3.34	2.51	10.86	8.35	2.51	16.24	5.94	11.62
1911	1,119	418.23	282.40	135.84	4.47	2.68	1.79	6.26	5.36	.89	10.73	8.04	2.68	13.15	4.79	11.47
Philippine Islands 1912	12,357	1,246.99	1,075.34	171.64	9.63	8.34	1.29	5.42	2.99	2.43	15.05	11.33	3.72	44.74	16.37	13.13
1911	12,454	1,218.24	1,027.62	190.62	11.64	10.52	1.12	5.30	1.93	3.37	16.94	12.45	4.49	43.15	15.75	12.93
China 1912	1.097	697.36	596.18	101.19	5.47	5.47	....	7.29	3.65	3.65	12.76	9.12	3.65	26.01	9.52	13.65
1911	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hawaii 1912	3.376	936.32	680.69	255.63	18.07	16.29	1.78	3.85	.89	2.96	21.92	17.18	4.74	33.44	12.24	13.08
1911	2.014	1,080.44	808.84	271.60	13.90	13.41	.50	2.98	.99	1.99	16.88	14.40	2.49	44.52	16.25	15.04
Canal Zone 1912	773	796.90	641.66	155.24	15.52	15.52	....	9.06	1.29	7.76	24.58	16.81	7.76	27.74	10.15	12.74
1911	204	941.18	818.63	122.55	....	....	....	4.90	....	4.90	4.90	....	4.90	25.64	9.36	9.94
Army transports 1912	1.093	734.68	701.74	32.94	....	....	....	6.40	3.66	2.74	6.40	3.66	2.74	33.20	12.15	16.54
1911	1.700	598.83	568.24	30.59	....	....	....	3.53	2.94	.59	3.53	2.94	.59	23.23	8.48	14.16
Total 1912	78,267	828. 4	674.29	149.64	13.48	12.18	1.24	4.79	2.87	2.41	18.21	14.55	3.65	30.99	11.02	13.87
1911	72,748	935.74	769.44	166.30	13.85	12.28	1.56	4.77	2.66	2.11	18.62	14.94	3.67	33.28	12.15	12.98
Regular Army, American troops, 1902 to 1911	65,831	1,246.33	1,036.95	209.38	20.16	18.06	2.10	7.16	4.70	2.46	27.32	22.76	4.56	46.23	16.88	13.55
Porto Rican regiment 1912	588	1,142.86	1,037.41	105.44	6.80	6.80	....	3.40	....	3.40	10.20	6.80	3.40	17.47	10.28	8.99
1911	580	1,050.00	968.97	81.03	8.62	6.90	1.72	6.90	3.45	3.45	15.52	10.35	5.17	29.78	10.87	10.35
Philippine Scouts 1912	5,407	678.20	617.16	61.04	8.19	6.92	1.27	4.37	3.09	1.27	12.56	10.01	2.54	20.32	7.44	10.96
1911	5,266	744.78	666.54	78.24	4.94	4.37	.57	4.56	3.23	1.33	9.50	7.60	1.90	19.86	7.25	9.73

Chart K.

Admission and Noneffective Rates for All Causes and Disease for the Army. American Troops (Enlisted Men) by Arms of Service, year 1912.



INFLUENCE OF ARMS OF SERVICE.

In these comparisons the enlisted men of the Ordnance Department and Signal Corps are not considered on account of their small number and the special character of their service.

The admission rate was highest for the Field Artillery and lowest for the Hospital Corps; the death rate was highest in the Hospital Corps and lowest in the Field Artillery.

The following table shows the relative frequency of the occurrence of the more important diseases for the various arms of the service, the figure 1 indicating the highest ratio and 6 the lowest in each case for each arm:

TABLE No. 4.—*The relative frequency of occurrence of certain important diseases by arms of service, in the Army, among American troops, enlisted men, year 1912.*

Arms of service.	Most important diseases.											
	Venereal.	Tonsillitis and pharyngitis.	Diarrhea and enteritis.	Malaria.	Bronchitis.	Alcoholism.	Rheumatism, articular.	Dysentery.	Tuberculosis.	Typhoid fever.	Pneumonia (lobar).	Injuries.
Cavalry	2	4	2	3	6	5	4	1	5	2	4	1
Field Artillery	3	1	1	2	1	4	1	5	2	4	6	2
Coast Artillery	5	6	5	6	4	2	5	6	6	5	5	4
Infantry	1	3	3	4	2	3	2	2	4	3	1	3
Engineers	4	5	6	1	3	6	6	4	3	1	2	5
Hospital Corps	6	2	4	5	5	1	3	3	1	6	3	6

INFLUENCE OF RACE.

(See Tables 67, 70, and 76.)

The tables show that the colored troops had the highest noneffective and death rates, the second highest admission and total loss rates, and the second highest average number of days for each case treated; the Porto Rican troops had the highest admission rate, the lowest death and noneffective rates and least number of days for each case treated. The white troops had the highest discharge and total loss rates, the highest average number of days for each case treated, and the second highest constant noneffective and death rates; and the Philippine troops had the lowest admission rate and the second lowest discharge rate. The constant noneffective rates were colored, 33.40; white, 29.93; Philippine, 20.32; Porto Rican, 17.47. The case admission rates were Porto Rican, 1,142.86; colored, 978.98; white, 815.80; Philippine, 678.20. The discharge rates were white, 13.76; Philippine, 8.19; colored, 6.92; Porto Rican, 6.80. The death rates were colored, 7.18; white, 4.66; Philippine, 4.37; Porto Rican, 3.40. The rates for total losses were white, 18.42; colored, 14.10; Philippine, 12.56; Porto Rican, 10.20. The average number of days lost for each case treated was white, 13.43; colored, 12.49; Philippine, 10.96; Porto Rican, 8.99.

The admission rate for venereal diseases was colored, 249.42; white, 130.79; Porto Rican, 105.44; Philippine, 55.67. Alcoholism, white, 17.80; colored, 9.23; Porto Rican, 1.70; Philippine, 0.37. Malarial fevers, Philippine, 241.91; Porto Rican, 52.72; white, 41.11; colored, 18.97. Tuberculosis (all) Philippine, 5.92; colored, 5.38; Porto Rican, 3.40; white, 3.39. Dysentery, Porto Rican, 34.01; Philippine, 7.03; white, 4.33; colored, 3.85. Rheumatism, Porto Rican, 11.90; colored, 11.54; white, 8.98; Philippine, 4.81. Diarrhea and enteritis, Porto Rican, 112.24; colored, 44.09; white, 29.69; Philippine, 18.86. Mental alienation, white, 3.47; colored, 3.08; Porto Rican, 1.70; Philippine, 0.92. It will be seen from the above figures that as usual the white race had the highest rate for alcoholism with the Philippine Scouts having the highest rate for malarial fevers due, to a large extent, to their living outside the barracks and being unprotected by mosquito nets. The colored troops, due to the unusually high rate for venereal diseases for those of that color who were serving in the Philippines, occupy the unenviable position of having the highest venereal rate.

It will be noted that the Porto Rican troops had by far the highest rates for gastro-intestinal disorders as shown by the exceedingly high rates for dysenteries and diarrhea and enteritis. The Philippine troops had the highest rate for tuberculosis (all) and the white troops for mental alienation.

COMPARISON WITH FOREIGN ARMIES.

An effort is made in Chart L and Tables Nos. 77 and 78 to make a comparison of the data available in the annexes to the annual reports of the medical departments of the armies of a number of foreign Governments. There are, however, so many factors which are peculiar to each country that an accurate comparison is impossible. For example, in most foreign services many of the minor ailments, which in the United States Army are treated in quarters and recorded with the same accuracy and care as in hospital cases, are not made of record in the medical reports.

Table No. 77 shows that the admission rate for the United States for all causes was 738.70. This compares with the foreign armies as follows:

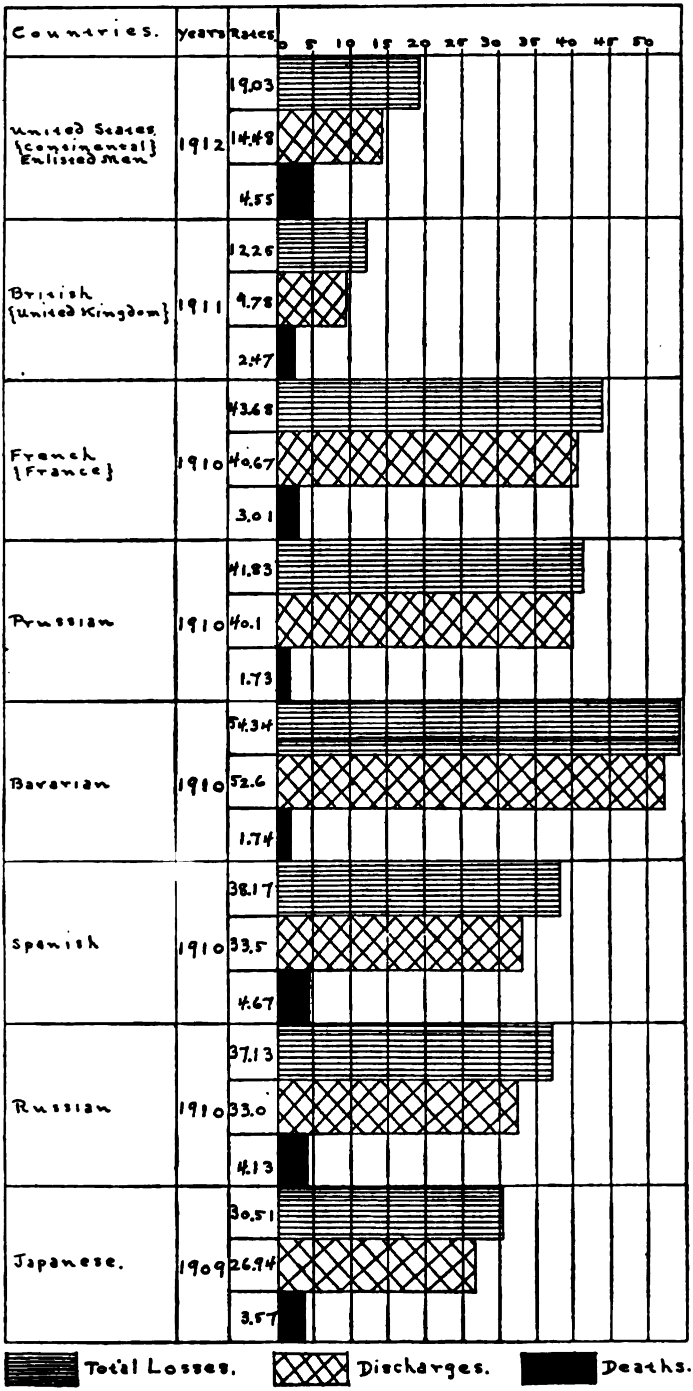
Higher:	
French	1,982.00
Dutch	1,280.00
Spanish	1,017.30
Japanese	856.30
Austro-Hungarian	823.20
British	802.77
Portuguese	782.00

Lower:	
Prussian	576.50
Bavarian	444.10
Russian	442.00

It will thus be seen that the admission rate for the Army in the United States was lower than any except that for the Russian, Bavarian, and Prussian. The constant noneffective rate for the Army in the United States was 27.15 per 1,000. This compares with foreign armies as follows: French, 32.58; Spanish, 31.56; Japanese, 30.97; British, 27.16; Portuguese, 26.36; Dutch, 24.95; Prussian, 24.34; Bavarian, 21.94. The United States Army, therefore, had a lower noneffective rate than the other countries with which the comparison was made, except the Bavarian, Prussian, Dutch, and Portuguese.

Chart L.

Rates for Total Losses, Discharges & Deaths, by Countries.



The discharge rate for the United States was 14.48 as compared with:

Higher:	
Bavarian	52.60
French	40.67
Prussian	40.10
Spanish	33.50
Higher—Continued.	
Russian	33.00
Japanese	26.94
Lower:	
British	9.78

These figures show very conclusively the fact that has been noted for a great many years that men are discharged much more freely in foreign armies than in the United States Army.

The death rate was 4.55 as compared with the Spanish, 4.67; Russian, 4.13; Japanese, 3.57; French, 3.01; Portuguese, 2.99; Austro-Hungarian, 2.84; British, 2.47; Dutch, 2.22; Bavarian, 1.74; Prussian, 1.73. Only one army had a higher death rate than the United States, that being the Spanish. As stated above, this is to be accounted for by the fact that the other armies discharge cases very much more freely than is done in the United States, and so send home to die cases which are in our Army cared for until the end in military hospitals.

The rate for the total losses, viz, discharges for sickness and deaths taken together, for the United States Army was 19.03 as compared with:

Higher:	
Bavarian	54.34
French	43.68
Prussian	41.83
Spanish	38.17
Higher—Continued.	
Russian	37.13
Japanese	30.51
Lower:	
British	12.25

The British Army was the only one having a lower rate for total losses than the United States.

Table No. 78 shows that the admission rates for alcoholism and gonorrhea are much higher for the Army in the United States than for any other army. The rate for chancroids (ulcus molle) is much higher in the United States than for any other army except the Spanish. The rate for syphilis was higher in the United States than for any other with which a comparison is made, except the British, the rates being as follows: United States, 25.58; British, 29.30; Austro-Hungarian, 16.70; Russian, 15.01; Spanish, 11.91; Prussian, 5.30; Bavarian, 4.20.

For typhoid fever (typhus abdominalis) the rate for the United States was 0.26 as compared with Spanish 7.03, Japanese 5.47, Russian 5.20, French 2.38, British 1.7, Austro-Hungarian 1.30, Dutch 0.51, Prussian 0.19, Bavarian 0.13. It will thus be seen that the rate for this disease for the United States was lower than for any other army with which compared, except the Prussian and Bavarian. The death rate for typhoid fever was for the United States 0.03 as compared with Spanish 1.20, Russian 0.75, Japanese 0.55, French 0.31, Austro-Hungarian 0.20, Dutch 0.128, Prussian 0.06, Bavarian, 0.03.

For malarial fevers the rate for the United States was lower than that for the British, Russian, Japanese, and Spanish, and higher than that for the Austro-Hungarian, Dutch, French, Bavarian, and Prussian in the order mentioned. For dysentery the rate for the United States was higher than for any other of the armies compared except for the British, our rate being 1.78 and the British 3.20.

For pulmonary tuberculosis the rate for the United States Army was 2.88 as compared with Spanish 5.81, Dutch 4.82, French 4.73, Japanese 3.85, Russian 2.09, Prussian 1.40, Bavarian 1.40, Austro-Hungarian 1.40, British 1.30.

It will be noticed that in these tables the figures for the American troops are for the year 1912, for the British for the year 1911, and for the others included in the table for 1910, except that for the Japanese and Portuguese which are for 1909.

SURGICAL OPERATIONS.

On page 220 will be found Table No. 66 of the principal surgical operations performed by medical officers upon officers and enlisted men. Operations upon families of officers and enlisted men and other civilians who are entitled to treatment at Army posts are not included. In 4,855 operations there were 20 failures and 25 deaths. The anæsthetic used was ether in 1,809 cases, chloroform in 226, chloroform and ether 49, gas 36, local 2,233, and none was required in 502 cases. Of major surgical operations, there were 357 operations for appendicitis, 241 for inguinal hernia, 17 for empyema, 25 for hepatic abscess, 46 for ischio-rectal abscess, and 303 for hemorrhoids. There were 7 deaths following operation for appendicitis, 2 each for intestinal obstruction and abscess of liver, gunshot wound (3), following amputation (3), and 1 each for operations on the following conditions: Goiter, ulcer of stomach, perforation of typhoid ulcer, tumor inoperable, subphrenic abscess, rupture of urinary bladder from fall, hypertrophy of prostate (senile), and cellulitis.

TABLE No. 5.—*Influence of disease on enlisted American troops of the Army, by length of service, age, and arms of service, for the year 1912.*

LENGTH OF SERVICE.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Rate per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Under 1 year	17,414	19,693	461	40	719.00	1,130.87	26.02	2.26	41.28
1 to 2 years	14,366	11,089	162	17	421.15	771.89	11.10	1.17	29.32
2 to 3 years	8,633	4,122	48	9	139.05	477.47	5.46	1.02	16.11
3 to 4 years	7,304	3,567	74	7	145.64	488.36	9.95	.94	19.94
4 to 5 years	6,921	3,779	57	12	143.00	546.02	8.09	1.70	20.66
5 to 10 years	11,154	5,513	89	38	212.42	494.26	7.84	3.35	19.04
10 years and over	12,475	5,012	79	66	210.31	401.76	6.23	5.20	16.86
Total	78,267	52,775	970	189	1,990.57	674.29	12.18	2.37	25.43

AGE.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
19 years and under	3,463	3,765	72	14	121.08	1,087.21	20.44	3.97	34.96
20 to 24 years	31,265	26,552	431	42	962.71	849.25	13.56	1.32	30.79
25 to 29 years	20,792	12,688	251	31	496.55	610.23	11.86	1.47	23.88
30 to 34 years	11,272	5,301	128	36	218.54	470.28	11.16	3.14	19.39
35 to 39 years	6,187	2,405	49	17	99.48	388.72	7.79	2.70	16.08
40 to 44 years	3,264	1,260	22	29	56.91	386.03	6.63	8.74	17.44
45 to 49 years	1,484	554	13	12	22.79	373.31	8.07	7.45	15.36
50 years and over	540	250	4	8	12.51	462.96	7.27	14.55	23.16
Total	78,267	52,775	970	189	1.990.57	674.29	12.18	2.37	25.43

TABLE No. 5.—*Influence of disease on enlisted American troops of the Army, by length of service, age, and arms of service, for the year 1912*—Continued.

ARMS OF SERVICE.

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Rate per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Infantry	27,860	19,294	292	76	763.83	692.54	10.34	2.69	27.42
Cavalry	13,122	8,921	118	23	349.63	679.85	8.85	1.72	26.64
Field Artillery	5,116	3,951	68	7	158.43	772.28	13.07	1.35	30.97
Coast Artillery	17,438	9,348	214	28	336.27	536.07	12.02	1.57	19.28
Ordnance	706	441	5	2	11.34	624.65	6.94	2.77	16.06
Engineers	1,747	1,139	20	4	50.37	651.97	11.27	2.25	28.83
Signal Corps	1,177	555	5	2	21.41	471.54	4.18	1.67	18.19
Hospital Corps	3,407	1,951	65	12	78.84	572.64	18.76	3.46	23.14
All others	7,694	7,175	183	35	220.45	932.54	23.27	4.45	28.65
Total	78,267	52,775	970	189	1,990.57	674.29	12.18	2.37	25.43

The preceding table shows that those having less than one year of service had as usual, the highest noneffective, admission, and discharge rates. These rates are also highest for these 19 years or under. The highest death rates were for those 50 years and over, and for those having 10 years or over of service. The highest noneffective and admission rates were in the Field Artillery, the highest death rate, and the highest discharge rate in the Hospital Corps.

UNITED STATES (CONTINENTAL) EXCLUSIVE OF ALASKA.

CONSTANTLY NONEFFECTIVE RATE.

The average mean strength of the troops serving in the United States was 58,374 (S. G. O.), of which 55,886 were white and 2,488 colored. The noneffective rate, the true measure of the effect of sickness on the military efficiency, for this year shows a decided improvement over last year. The rate was 27.15 per 1,000, as compared with 31.40 for 1911 and 33.95 for 1910. That for disease was 22.57, and for injury 4.58 in 1912, as compared with 26.41 and 4.99 for 1911. The number constantly sick from disease and external causes in 1912 was 1,584, and in 1911, 1,734. In other words, in 1912, there were 150 less men constantly sick than in 1911, although the average strength in 1912 was 3,134 more than it was in 1911. The noneffective rate for 1910, 1909, 1908, 1907, and 1906 was, respectively, 33.95, 39.70, 41.19, 45.22, and 46.92. The highest noneffective rate for disease was that for venereal disease, 5.96 per 1,000. In 1911 it was 8.82 and in 1910, 10.14. The second highest was tuberculosis (all kinds), 1.65. This rate was 1.63 in 1911, and 1.87 in 1910.

ADMISSION RATES.

As stated on page 16 in the tabulations for 1912, cases only are counted, whereas in the years 1904 to 1911, inclusive, admissions were counted. As stated, in counting cases only all readmissions for obviously the same attack of the same disease are omitted from the tabulation. Table 81, page 285, shows case admissions and total admissions for the Army, United States, and American troops, Philippine Islands, 1904 to 1911, inclusive.

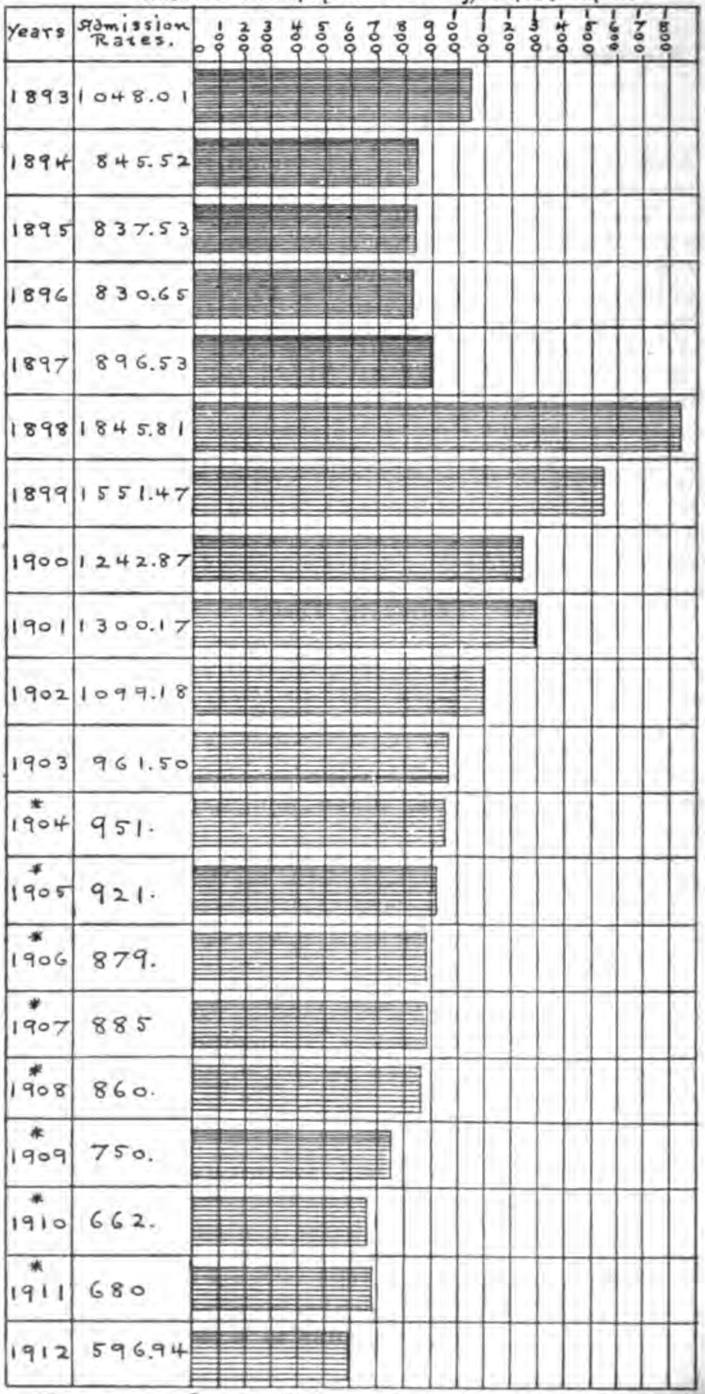
The case admission rate for 1912 was 738.70 per 1,000. This is quite an improvement as compared with the corresponding rate, 837 for 1911, 840 for 1910, 945 for 1909, 1,079 for 1908, and 1,093 for 1907. The case admission rate for disease was, in 1912, 596.94. The corresponding rate was 680 per 1,000 in 1911 and 662 in 1910. The case admission rate for external causes was 141.76 per 1,000. This is also an improvement over the corresponding rate for external causes of 157 for 1911 and 178 for 1910. The highest case admission rate was for venereal diseases, 115.74 per 1,000, as compared with the corresponding rate of 145.29 for 1911. The second highest rate was for diseases of the pharynx, 74.45.

DISCHARGES FOR DISABILITY.

The disability discharge rate for the United States for 1912 was 14.48 per 1,000, as compared with 15.00 for 1911, 15.28 for 1910, 18.87 for 1909, and 21.35 for 1908. These figures show a very material reduction. The cause for this improvement during the last few years is believed to have been due to a large extent to General

Chart M.

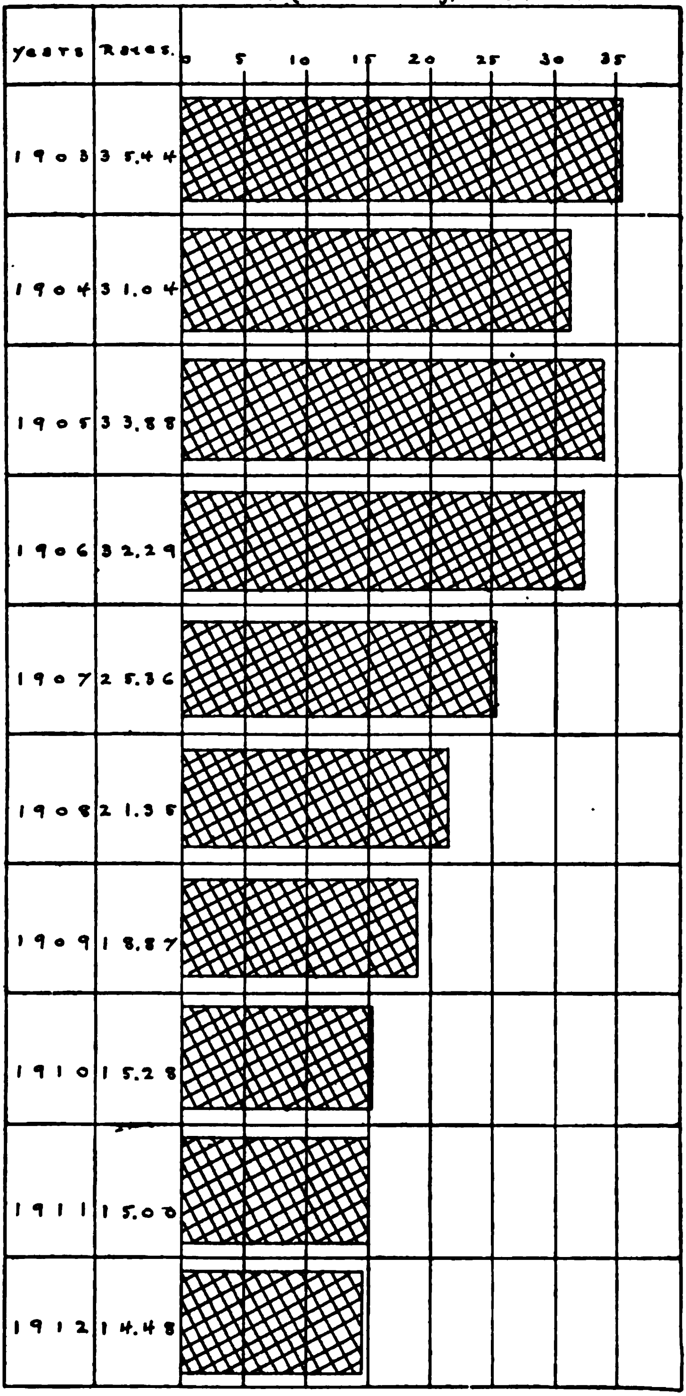
Admission Rates for Disease for the United States American Troops {Enlisted Men} years, 1893-1912.



* Excess of Cases Deducted to Correspond with years preceding 1904, and 1912.

Chart N.

Discharge Rates, All Causes, for the United States, for American Troops {Enlisted Men} years, 1903-1912.



Order 174, War Department, 1909, which requires that soldiers certified by medical officers to be permanently incapacitated for the military service shall be examined and observed by a board of three medical officers at a recruit depot or a general hospital before discharge.

The following table shows the result of the work of the boards at the recruiting depots:

Table No. 6.—*Results at recruit depots of examination by boards, of soldiers recommended for discharge.*

	Recruit depots.					
	Columbus Barracks, Ohio.	Jefferson Barracks, Mo.	Fort Logan, Colo.	Fort McDowell, Cal.	Fort Slocum, N. Y.	Total.
Number received	23	84	85	112	178	482
Number discharged for disability	20	64	66	101	135	386
Incurred "In line of duty"	3	19	26	39	24	111
Incurred "Not in line of duty"	17	45	40	62	111	275
Number in which line of duty was changed from "Yes" to "No"	1	10	3	....	3	17
Number in which line of duty was changed from "No" to "Yes"	....	2	1	2	2	7
Number returned to duty	1	13	9	2	8	33
Number otherwise disposed of	2	....	5	6	12	25
Number remaining at end of year	....	7	5	3	23	38

The principal causes of discharge with the percentage of the total number of discharges were mental alienation 21.07, tuberculosis (all) 12.69, venereal diseases 9.52, flat feet 8.76, and organic diseases of the heart 5.58.

Table No. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska).*

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
General diseases	252	31.98	106	72	74	6	23
Tuberculosis (of the lungs, 94; of other organs, 6)	100	12.69	76	24	......	......	12
Venereal diseases	75	9.52	......	18	57	......	7
Syphilis (tertiary, 21; secondary, 14; undetermined, 2)	37	4.70	......	14	23	......	5
Gonorrhea and results (arthritis, 18; chronic gonorrhea, 9; diseases of the eyes, 1; epididymitis, 1; other results, 7)	36	4.57	......	4	32	......	2
Chancroidal buboes, chronic	2	.25	......	......	2	......	......
Alcoholism, chronic	22	2.79	......	11	11	......	1
Chronic rheumatism and gout (chronic articular, 13; arthritis deformans, 2; gout, 1)	16	2.03	7	8	1	......	7
Measles	6	.76	6	......	......	6	......
Dysentery (bacillary, 1; entamoebic, 5)	6	.76	6	......	......	......	......
Exophthalmic goiter	6	.76	1	5	......	......	1
Drug habit (cocaine, 4; morphine, 1)	5	.63	......	......	5	......	......
Diabetes mellitus	4	.51	3	1	......	......	1
Scoliosis	2	.25	......	2	......	......	......
Cancer	2	.25	2	......	......	......	......
Diabetes insipidus	2	.25	......	2	......	......	......
Acute articular rheumatism	1	.13	1	......	......	......	......

Table No. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska)*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty
General diseases—Continued.							
Deafness following mumps	1	0.13	1				
Purulent infection (pyemia)	1	.13	1				
Benign tumor (cerebral)	1	.13	1				
Leukæmia	1	.13	1				
Hemophilia	1	.13		1			1
Diseases of the nervous system and organs of special sense	277	35.15	86	176	12	5	34
Diseases of the nervous system	237	30.08	67	158	12		30
General paralysis of the insane and other forms of mental alienation	166	21.07	43	112	11		21
Dementia praecox	50	6.35	21	29			3
Defective mental development	44	5.58		44			11
Psychosis maniac depressive	15	1.90	8	7			
General paralysis of the insane	10	1.27	3		7		
Psychasthenia	2	.25		2			1
Psychosis traumatic	1	.13		1			
Other varieties	44	5.58	11	29	4		6
Epilepsy	25	3.17	9	16			3
Neuralgia and neuritis (hysteria, 13; neuritis, chronic, 2; sciatica, chronic, 1)	16	2.03	3	13			2
Other diseases of the system (neurasthenia, 8; others, 8)	16	2.03	3	13			3
Other diseases of the spinal cord (progressive muscular atrophy, 3; multiple cerebrospinal sclerosis, 2; spastic paralysis, 1)	6	.76	4	2			1
Locomotor ataxia	3	.38	2		1		
Paralysis, cause undetermined	2	.25	2				
Chorea	2	.25		2			
Cerebral apoplexy	1	.13		1			1
Diseases of the ears (all otitis media)	24	3.05	11	13		5	2
Diseases of the eyes (trachoma, 3; retinitis, chronic, 3; choroiditis, 2; others, 8)	16	2.03	7	9			2
Diseases of the bones and of the organs of locomotion	99	12.56	20	79		2	9
Diseases of the joints	88	11.17	14	74		2	7
Flat feet	69	8.76	2	67			5
Synovitis, chronic	5	.63	3	2		1	1
Arthritis, chronic	4	.51	4			1	
Hallux valgus	4	.51	1	3			1
Ankylosis	3	.38	3				
Hammer toe	2	.25		2			
Necrosis	1	.13	1				
Diseases of the bones (mastoiditis chronic, 2; osteomyelitis, 2; periostitis, 2)	6	.76	2	4			1
Other diseases (chronic muscular rheumatism, 2; chronic metatarsalgia, 1; others, 2)	5	.63	4	1			1
Diseases of the circulatory system	56	7.11	34	22		4	14
Organic diseases of the heart (chronic endocarditis, 25; valvular disease, 16; chronic myocarditis, 2; cardiac neurosis, 1)	44	5.58	27	17		3	11
Diseases of the veins (phlebitis, 3; hemorrhoids, 1; varicocele, 1)	5	.63	3	2			1
Others of the system (kachycardia, 2; functional disease, 1)	3	.38	1	2			1
Endocarditis acute (endocarditis acute, 1; myocarditis acute, 1)	2	.25	2			1	
Diseases of the arteries (arterial sclerosis)	1	.13	1				
Angina pectoris	1	.13		1			
Diseases of the genito urinary system	39	4.95	12	26	1		13
Diseases of the bladder (enuresis, 19; cystitis, 2)	21	2.66	1	19	1		9
Bright's disease (chronic parenchymatous nephritis, 9; chronic interstitial nephritis, 5)	14	1.78	9	5			3
Other diseases of the kidneys (chronic pyelitis, 2; pyonephrosis, 1)	3	.38	2	1			1
Other diseases of the system (chronic epididymitis)	1	.13		1			

TABLE No. 7.—*Discharges for disability, year 1912, United States, continental (excluding Alaska)*—Continued.

Causes of discharge.	Number discharged.	Percentage of total discharges for diseases or external causes.	Discharges for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
Diseases of the digestive system	35	4.44	12	22	1	1	13
Hernia and intestinal obstructions (inguinal, 19; ventral, 1; omental, 1; obstruction, 1)	22	2.79	4	18	......	1	11
Other diseases of the intestines (fistula in ano, 2; chronic ulcer of rectum, 1; faecal fistula, 1)	4	.51	3	1	......	......	1
Ulcer of the stomach	3	.38	2	1	......	......	......
Diarrhea and enteritis (chronic colitis, 1; chronic gastro enteritis, 1)	2	.25	1	1	......	......	1
Others of digestive system (weak abdominal scar and peritoneal adhesion, 1; weakened abdominal muscles following operation, 1)	2	.25	2	......	......	......	......
Others of the stomach (chronic nervous dyspepsia)	1	.13.	......	1	......	......	......
Diseases of the mouth (aphthous stomatitis)	1	.13	......	......	1	......	......
Diseases of the respiratory system	17	2.16	7	10	......	2	3
Chronic bronchitis	7	.89	2	5	......	......	1
Diseases of the nasal fossa (chronic atrophic rhinitis)	2	.25	......	2	......	......	1
Pneumonia	2	.25	2	......	......	2	......
Asthma, bronchial	2	.25	......	2	......	......	......
Pleurisy (chronic fibrinous, 1; serofibrinous, 1)	2	.25	2	......	......	......	......
Diseases of the thyreoid body (cystic goiter)	1	.13	1	......	......	......	......
Others of the system (general physical weakness and debility probably due to pulmonary disease)	1	.13	......	1	......	......	1
Diseases of the skin (corns, 3; chronic eczema, 3; trichophytosis, 1; bromidrosis, 1; psoriasis, 1; extensive scar, 1; and horny and deformed nails, 1)	11	1.40	2	9	......	1	3
Congenital malformations (hyperphonia)	1	.13	......	1	......	......	......
Ill defined diseases (general physical weakness and debility)	1	.13	......	1	......	......	1
Total for diseases	788	100.00	279	421	88	21	113
EXTERNAL CAUSES.							
Fractures	33	42.86	26	......	7	......	......
Gunshot wounds	13	16.88	9	......	4	......	1
Results of injuries incurred prior to enlistment	10	12.99	......	10	......	......	2
Incised wounds	7	9.09	5	......	2	1	......
Effects of crushing injuries	4	5.19	2	......	2	......	......
Frostbite	2	2.60	1	......	1	......	......
Dislocations	2	2.60	2	......	......	......	......
Lacerated wounds	2	2.60	2	......	......	......	......
Punctured wound	1	1.30	1	......	......	......	......
Sprain	1	1.30	1	......	......	......	......
Strain, muscular	1	1.30	1	......	......	......	......
Ruptured wound	1	1.30	1	......	......	......	......
Total	77	100.00	51	10	16	1	3
Total diseases	788	91.10	279	421	88	21	113
Total external causes	77	8.90	51	10	16	1	3
Grand total	865	100.00	330	431	104	22	116

DEATHS.

The death rate for disease for the United States was 2.28 per 1,000, as compared with 2.83 in 1911 and 2.30 in 1910. That for external causes was 2.28 in 1912, 1.89 in 1911, and 2.12 in 1910. The total for diseases and external causes was 4.55 in 1912, as compared with

4.72 in 1911, and 4.42 in 1910. The total number of deaths in 1912 was 272; of this number 136 were due to disease and 136 to external causes. Deaths, as well as discharges, which occurred in the United States among those who have been invalided home from their commands in foreign service, have been charged to the country where such commands are stationed. Tuberculosis caused 16 deaths in 1912, and 29 in 1911; measles, 12 in 1912, and 25 in 1911; organic heart disease, 12 in 1912, and 16 in 1911; pneumonia, lobar, 12 in 1912, and 18 in 1911, and nephritis 12 in 1912, and 6 in 1911. There were 47 suicidal deaths in 1912 and 36 in 1911; 16 homicidal in 1912, and 14 in 1911; and 73 accidental in 1912, and 55 in 1911. Of the accidental deaths, drowning caused the largest number, 24 in all. In 1911 there were 13 deaths due to this cause.

TABLE NO. 8.—*Deaths among enlisted troops serving in the United States, continental (excluding Alaska), year 1912.*

Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Deaths from disease or external causes.
DISEASES.			
Tuberculosis (pulmonary, 13; other organs, 3)	16	0.27	117.65
Measles	12	.20	88.24
Organic heart disease	12	.20	88.24
Pneumonia, lobar	12	.20	88.24
Nephritis (acute, 6; chronic, 6)	12	.20	88.24
Alcoholism (acute, 7; chronic, 2)	9	.15	66.18
Cancer	6	.10	44.12
Meningitis (simple, 2; cerebrospinal, 4)	6	.10	44.12
Broncho pneumonia	4	.07	29.41
Appendicitis	4	.07	29.41
Venereal diseases (syphilis, 2; gonorrhea, 1)	3	.05	22.06
Apoplexy, cerebral	3	.05	22.06
Aneurysm	3	.05	22.06
Rheumatic fever (acute, 1; subacute, 2)	3	.05	22.06
Typhoid fever	2	.03	14.71
Septicemia	2	.03	14.71
General paralysis of the insane	2	.03	14.71
Congestion of the lungs	2	.03	14.71
Peritonitis, general	2	.03	14.71
Dysentery, chronic amoebic	1	.02	7.35
Diabetes, mellitis	1	.02	7.35
Leukaemia	1	.02	7.35
Pernicious anemia	1	.02	7.35
Purpura hemorrhagica	1	.02	7.35
Morphinism	1	.02	7.35
Abscess of brain	1	.02	7.35
Otitis media	1	.02	7.35
Angina pectoris	1	.02	7.35
Arterial sclerosis	1	.02	7.35
Cerebral embolism	1	.02	7.35
Goiter	1	.02	7.35
Chronic interstitial pneumonia	1	.02	7.35
Ulcer of stomach, perforation	1	.02	7.35
Ulcer duodenal, perforation	1	.02	7.35
Enteritis	1	.02	7.35
Cirrhosis of liver	1	.02	7.35
Biliary calculi and multiple liver abscesses	1	.02	7.35
Subphrenic abscess	1	.02	7.35
Gangrene from septic infection, slight wound of hand	1	.02	7.35
Unknown cause	1	.02	7.35
Total for disease	136	2.28	1,000.00

TABLE No. 8.—*Deaths among enlisted troops serving in the United States, continental (excluding Alaska), year 1912*—Continued.

Causes of death.	Number.	Ratio per 1,000 of—	
		Mean strength.	Deaths from disease or external causes.
EXTERNAL CAUSES.			
Suicidal:			
By firearms (rifle, 11; revolvers, 12; shotgun, 1)	24	0.40	176.47
By poisoning (carbolic acid, 7; wood alcohol, 2; arsenic, 1; strychnine, 1; narcotic, 1; bichloride of mercury, 1)	13	.22	95.59
By asphyxiation (illuminating gas)	1	.02	7.35
By strangulation (by use of bed sheet around neck and radiator)	1	.02	7.35
By drowning	4	.07	29.41
By incised wounds (of neck, 3)	3	.05	22.06
By crushing (decapitation by railroad train)	1	.02	7.35
Total suicides	47	.79	345.59
Homicidal:			
By firearms: By civilians, revolver, 3; by comrades, rifle, 2; revolver, 1; by sentry or guard, while trying to escape, revolver, 1; rifle, 1; by noncommissioned officer for interference while in the discharge of his duties, revolver, 1; by police, revolver, 1; by unknown persons, 2	12	.20	88.24
By cutting and piercing instruments: Knife wound of neck in a drunken brawl while acting as peacemaker, 1; knife wound between ribs (while absent without leave) by another soldier, 1; pocketknife wounds penetrating brain, by another soldier, 1	3	.05	22.06
By other means: Kicked by another soldier in a drunken brawl rupturing brain, 1	1	.02	7.35
Total homicides	16	.27	117.65
Accidental:			
By acute poisoning (by wood alcohol, 6)	6	.10	44.12
By absorption of deleterious gases (ether anaesthesia first stage of, during operation for septic alveolar abscess, 1; asphyxiation, by illuminating gas, 1)	2	.03	14.71
By drowning (while bathing, 10; circumstances unknown, 7; fell from cliff, 1; from railroad bridge, 2; while boating, 1; while watering horse, 1; upsetting of boat, 1; falling overboard with grapling hook, rope around neck and shoulders, 1)	24	.40	176.47
By firearms: accidental (by shot gun, 1; fragment of breach of cannon, 1; rifle, 3; revolver, 2)	7	.12	51.47
By cutting or piercing instruments, accidental (stab wound, accidentally self inflicted by bayonet when drunk)	1	.02	7.35
By fall (concussion of brain by falling over parapet while absent without leave, 1; ruptured kidney with hemorrhage, blown off train while acting as guard, 1; fracture of surgical neck of humerus and shock, fall down stairs in company barracks, 1; fracture of leg by falling while drunk, 1; fracture of skull by falling from tower caused by contact with live wire, 1; fracture of cervical vertebrae, by fall from rings in gymnasium, 1; fracture of cervical vertebrae by fall from horse, 1; fracture of skull, by falling from horse, 2; punctured bladder by falling on sharp stick, 1)	10	.17	73.53
By machinery (fracture of skull due to being caught in revolving gear of 10-inch disappearing rifle, 1)	1	.02	7.35
By crushing (concussion of brain, struck by freight train, 1; fracture of skull, by falling from train, 1; from street car, 1; crushing by being run over by railroad trains, 8; crushing by being run over by loaded wagon, 1; crushing by being run over by automobile truck, 1; crushing by load of lumber falling on him while at work, 1; crushing by mass of earth caving in on him while at work, 1; crushing by fall in aeroplane, 1; crushing by being struck by trolley car while riding runaway horse, 1; crushing by fall of horse, 1; cause not stated, fracture of skull, 1)	19	.32	139.70
Effects of heat (sunstroke incurred by training for running race in hot sun)	1	.02	7.35
Lightning, lightning strokes	2	.03	14.71
Total accidental	73	1.22	536.76
Total external causes	136	2.28	500.00
Deaths from disease	136	2.28	500.00
Deaths from external causes	136	2.28	500.00
Grand total	272	4.55	1,000.00

PREVALENCE OF SPECIAL DISEASES.

TYPHOID FEVER.

Eighteen cases of typhoid fever (officers and enlisted men) occurred during the year in the Army stationed within the geographical limits of the United States with 3 deaths, as compared with 44 cases with 6 deaths in 1911; 142 with 10 deaths in 1910; and 173 with 16 deaths in 1909. Fifteen of the cases with 2 deaths occurred among enlisted men, and 3 cases with 1 death among officers. The following table shows the distribution at the different posts, with the days lost and the number constantly sick:

TABLE No. 9.—*Typhoid fever at military stations, United States (continental), officers and enlisted men, year 1912.*

	Cases.	Days treated.	Constantly sick.	Died.
Jefferson Barracks, Mo	3	312	0.85	
Columbus Barracks, Ohio	2	88	.24	1
Washington, D. C., attending surgeon's office	[1] 2	129	.35	[1] 1
Washington Barracks, D. C	[1] 1	73	.20	
Fort Oglethorpe, Ga	2	85	.23	
Fort Slocum, N. Y	1	117	.32	
Fort Williams, Me	1	56	.15	
Fort Leavenworth, Kans	1	55	.15	
Fort Wayne, Mich	1	27	.07	
Fort McDowell, Cal	1	[2] 5	.01	
Field, central division, Las Cienegas, N. Mex	[3] 1	13	.04	1
Field, western division, Camps, Cal	[4] 1	55	.15	
Field, western division, Douglas, Ariz	[5] 1	87	.24	
Fort Porter, N. Y., remaining from last year		26	.07	
Fort Sam Houston, Tex., remaining from last year		18	.05	
Army and Navy General Hospital, Hot Springs, Ark., remaining from last year		13	.04	
Fort Logan, Colo., remaining from last year		1	.003	
Total	18	1,160	3.17	3

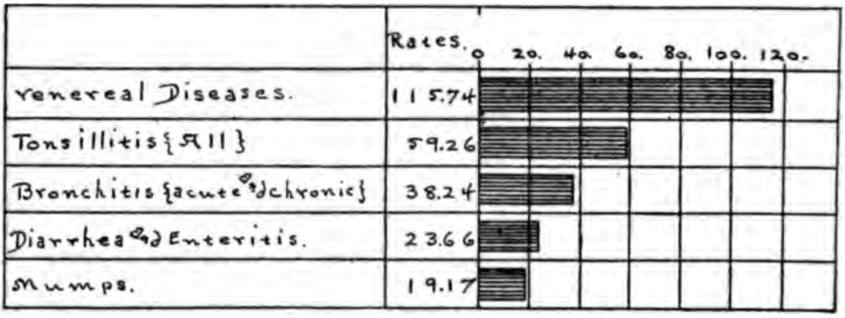
[1] Treated at the Walter Reed General Hospital.
[2] Term expired and soldier discharged at his own request before recovery.
[3] Treated at Fort Bliss, Tex.
[4] Treated at Fort Rosecrans, Cal.
[5] Treated at Fort Huachuca, Ariz.

The admission and death rates for this disease (officers and enlisted men) were 0.29 and 0.0475, respectively, as compared with 0.76 and 0.10 for 1911. The case mortality was 16.6 per cent, which is apparently quite high. It must be obvious, however, that when the number of cases of any of the serious infectious diseases is so small the case mortality rate is liable to fluctuate greatly and has little importance. The following list shows for the entire Army, officers and enlisted men, American and native troops, the place and date of the occurrence of each case of typhoid and paratyphoid fever, whether the typhoid prophylactic had been given, the result of the attack and such other information as is considered necessary under remarks.

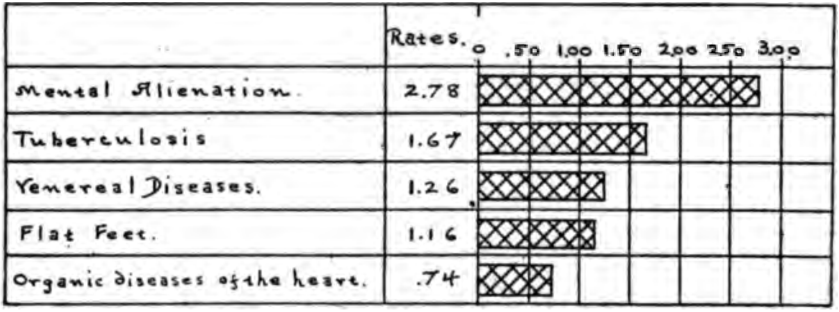
Chart O.

Admission, Discharge, Death & Noneffective Rates for Diseases having the highest rates for the United States {Enlisted Men} year, 1912.

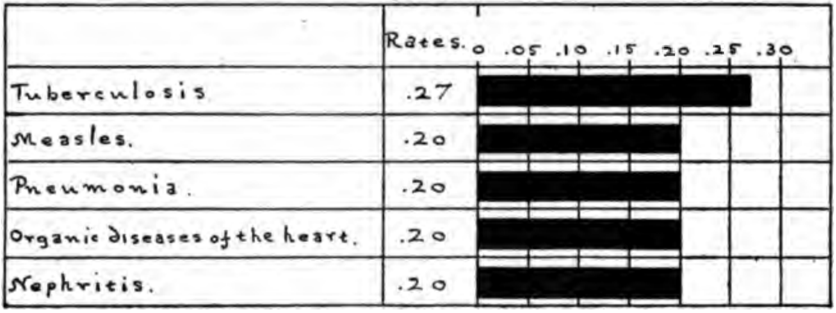
Admissions.



Discharges.



Deaths.



Noneffective.

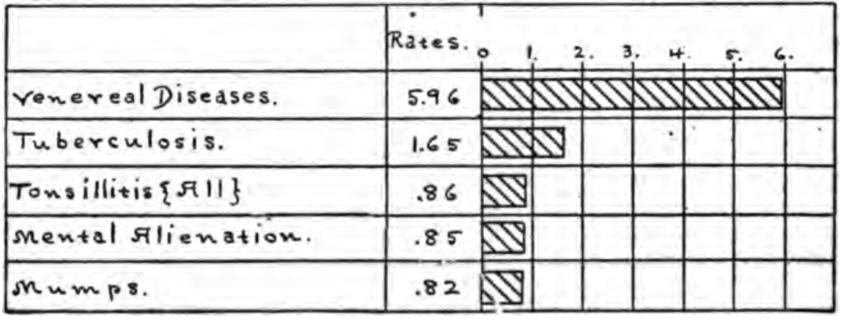
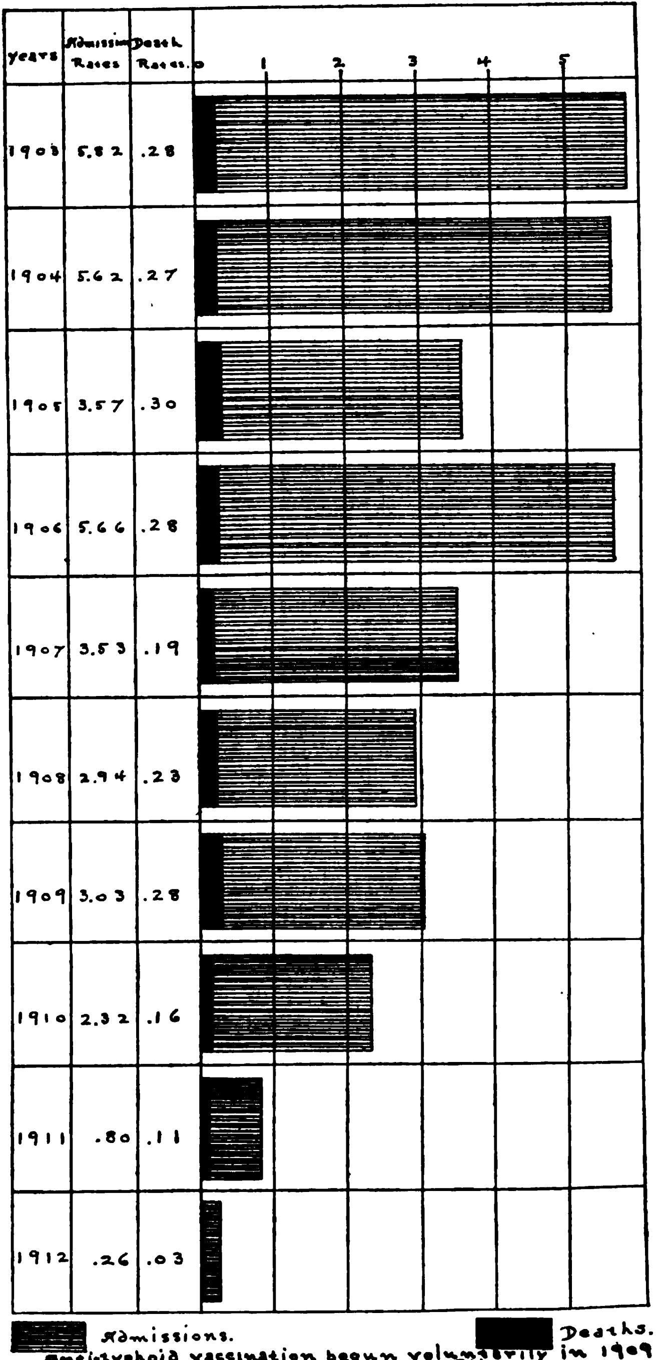


Chart P.

Typhoid Fever.
Admission and Death Rates.

Admission and Death Rates for Typhoid Fever for the United States, American Troops (Enlisted Men) years, 1903-1912:



Years	Admission Rates	Death Rates.
1903	5.82	.28
1904	5.62	.27
1905	3.57	.30
1906	5.66	.28
1907	3.53	.19
1908	2.94	.23
1909	3.03	.28
1910	2.32	.16
1911	.80	.11
1912	.26	.03

Anti-typhoid vaccination begun voluntarily in 1909 was made compulsory in 1911.

TABLE No. 10.—*Typhoid fever, United States Army (all), 1912.*

	Place of occurrence.	Date when admitted to hospital.	Had typhoid prophylactic been given?	Result.	Remarks.
	AMERICAN TROOPS, UNITED STATES.				
1	Fort McDowell	Jan. 8	No	Recovered	Casual, just arrived from Philippine Islands, where had not received prophylactic.
2	Fort Slocum	Feb. 1	Yes	do	
3	Columbus Barracks	Feb. 8	No	Died	Infection prior to enlistment.
4	do	Mar. 5	No	Recovered	Do.
5	Army Medical School (officer)	Mar. 20	No	do	Had not received prophylactic, for special reasons.
6	Camp, United States troops Campo, Cal.	June 4	Yes	do	
7	Lima, Ohio (on duty with Ohio National Guard).	do	No	do	On detached service and had not received prophylactic.
8	Jefferson Barracks	June 24	No	do	Infection prior to enlistment.
9	Camp, United States troops, Douglas, Ariz.	July 2	No	do	Stated that he had had typhoid fever to escape administration of prophylactic.
10	Fort Williams, Me	Aug. 3	Yes	do	
11	Washington, D. C. (officer)	Aug. 26	No	Died	Had pulmonary tuberculosis and hence had not received prophylactic.
12	Fort Oglethorpe	Aug. 30	Yes	Recovered	
13	Jefferson Barracks	Sept. 8	No	do	Infection prior to enlistment.
14	do	Oct. 5	No	do	Do.
15	Fort Leavenworth	Oct. 15	Yes	do	
16	Washington Barracks	Oct. 18	Yes	do	
17	Camp, United States troops, Las Cienegas, N. Mex.	Oct. 27	No	Died	Had not received prophylactic, through oversight.
18	Fort Oglethorpe (officer)	Dec. 19	No	Recovered	Had typhoid fever in childhood.
	AMERICAN TROOPS, PHILIPPINE ISLANDS.				
1	Camp Keithley	Apr. 14	No	Recovered	Infected while in the field. On duty in the field and prophylactic not administered.
2	do	Apr. 23	No	do	Do.
3	do	Apr. 29	No	do	Do.
4	do	May 11	No	do	Do.
5	do	May 15	No	do	Do.
	AMERICAN TROOPS, HAWAII.				
1	Schofield Barracks	Apr. 15	Yes	Recovered	
	NATIVE TROOPS, PHILIPPINE ISLANDS.				
1	Tucuran	Feb. 20	No	Recovered	Reason for prophylactic not being administered not known.
2	Camp Gregg	July 9	No	Died	Do.
3	Malolos, Bulacan	Aug. 16	Yes	Recovered	

PARATYPHOID.

	AMERICAN TROOPS, UNITED STATES.				
1	Fort Crook	Feb. 5		Recovered	
2	Fort Niagara	May 26		do	
3	Fort Thomas	Oct. 7		do	
	AMERICAN TROOPS, PHILIPPINE ISLANDS.				
1	Augur Barracks	Dec. 7		Recovered	

The following is a tabulation of these cases:

TABLE No. 11.—*Typhoid and paratyphoid fever, United States Army, officers and enlisted men, American and native troops, calendar year 1912.*

	Cases.		Deaths.		Immunized persons.	
	Number.	Rates for 1,000 mean strength.	Number.	Rates for 1,000 mean strength.	Cases.	Deaths.
TYPHOID FEVER.						
United States	18	0.29	3	0.0475	6	0
Alaska	0	0	0	0	0	0
Philippine Islands:						
American troops	5	0.38	0	0	0	0
Native troops	3	0.55	1	0.182	1	0
China	0	0	0	0	0	0
Hawaii	1	0.28	0	0	1	
Panama	0	0	0	0	0	0
Porto Rican regiment	0	0	0	0	0	0
Transports	0	0	0	0	0	0
Total Army	27	0.31	4	.044	8	0
PARATYPHOID FEVER.						
United States	3	0.05	0	0	....	....
Philippine Islands: American troops	1	0.076	0	0	....	....
Total (paratyphoid)	4	0.045	0	0	....	....

It will be noticed from the total tabulation above that, as in 1911, not a single epidemic of this disease occurred in the United States during the year. At only two posts in the United States did more than one case occur during the year, and at these two posts, Columbus Barracks and Jefferson Barracks, the cases were all in recruits infected prior to enlistment, and not more than one occurred in any one month. In the Philippine Islands among American troops the disease appeared at only one post, Camp Keithley. Here the men had been in the field for several months and were infected there. They had not been immunized. The prophylactic had been asked for some months before, but when it was received the troops were in scattered detachments in the field, and it was considered impracticable to immunize them. Five of the cases in the United States were in recruits recently enlisted, who were in incubation period when enlisted. The following tabulation is for the purpose of comparing the figures for 1911 and 1912.

Typhoid fever, United States Army, officers and enlisted men, American and native troops.

	Cases.		Deaths.		Immunized persons.	
	Number.	Rates per 1,000 mean strength.	Number.	Rates per 1,000 mean strength.	Cases.	Deaths.
1911	69	0.85	8	0.09	11	1
1912	27	.31	4	.044	8	0

(NOTE.—See footnote, page 237, pertaining to table on page 51, Report 1912.)

Special attention is invited to chart P, page 51, showing the admissions and death rates for enlisted men only for the United States. This chart shows graphically the remarkable decrease in both rates as the result of the use of the typhoid prophylactic. This immunization was begun, but was voluntary, in 1909, and was made compulsory for the entire Army late in 1911. (See the annual report of this office for 1912, pp. 52 et seq., for the various steps from voluntary to compulsory prophylaxis.) Chart R, page 56, is a graphic portrayal of the admission rates for malarial fevers, undetermined fevers, and typhoid fever for the United States. This chart shows that there has been a steady reduction in the rates for malaria and undetermined fevers, as the result of sanitary measures, but not so marked as the decrease in the rate of typhoid fever, the result of improved sanitation and typhoid prophylaxis. It must be especially emphasized that there has been no lessening of the efforts in the Army to prevent, by improved sanitary measures, the occurrence of typhoid infection. Advances in the other sanitary measures have gone on, hand in hand, with the extension of the typhoid prophylaxis. It is believed that the typhoid prophylaxis is as potent a preventive against typhoid as vaccination is against smallpox. Vaccination is certainly a reliable measure for the prevention of smallpox, and yet few would advocate the abolition of other needful sanitary measures. From chart R it is also apparent that typhoid fever in the Army is not being incorrectly diagnosed and placed under the head of other fevers.

It has now been clearly demonstrated that the immunization against typhoid fever by the use of typhoid prophylactic is a thoroughly practical measure for the prevention of this disease; that it is unattended by bad results, and that its protective value is very probably equal to that afforded against smallpox by vaccination.

It was stated in the 1912 report that since the beginning of the year 1912 each case as it is reported has been carefully investigated. Surgeons are required to furnish a complete history of every case, giving in detail the methods used in arriving at the diagnosis. This office insists that in each case, if possible, the diagnosis be confirmed by a blood culture or by a culture from the feces or urine. Since the Widal reaction occurs in practically all persons who have received the prophylactic and persists in the blood for some time thereafter, it can not be considered as positive evidence of the presence of typhoid fever in an immunized person. It is recognized that it is not possible in every case of typhoid fever to confirm the diagnosis by cultures and it is not the practice of this office to refuse to accept such a diagnosis when the clinical findings are clear. It is believed, however, that in practically all the cases of typhoid fever it should be possible to isolate the organisms either from the blood or from the urine or feces at some time during the course of the disease. Every case reported is carefully followed up. In two instances in 1912 the surgeons were advised to report cases as typhoid when the laboratory reports were negative, and when they were inclined to report the disease under another head. In only one instance was it necessary to advise the surgeon to change a diagnosis from typhoid to something else. In this case all the evidence was against the case being typhoid.

The results of this campaign bid fair to be even more brilliant in 1913 than in 1912. During the first six months of 1913, so far as can be determined from the information on hand at this date (August 1),

Chart Q.

Typhoid Fever.
Noneffective Rates.
Noneffective Rates for Typhoid Fever for the Army (Officers, American Troops, Porto Ricans and Philippine Scouts), 1903–1912.
Includes Paratyphoid Fever.

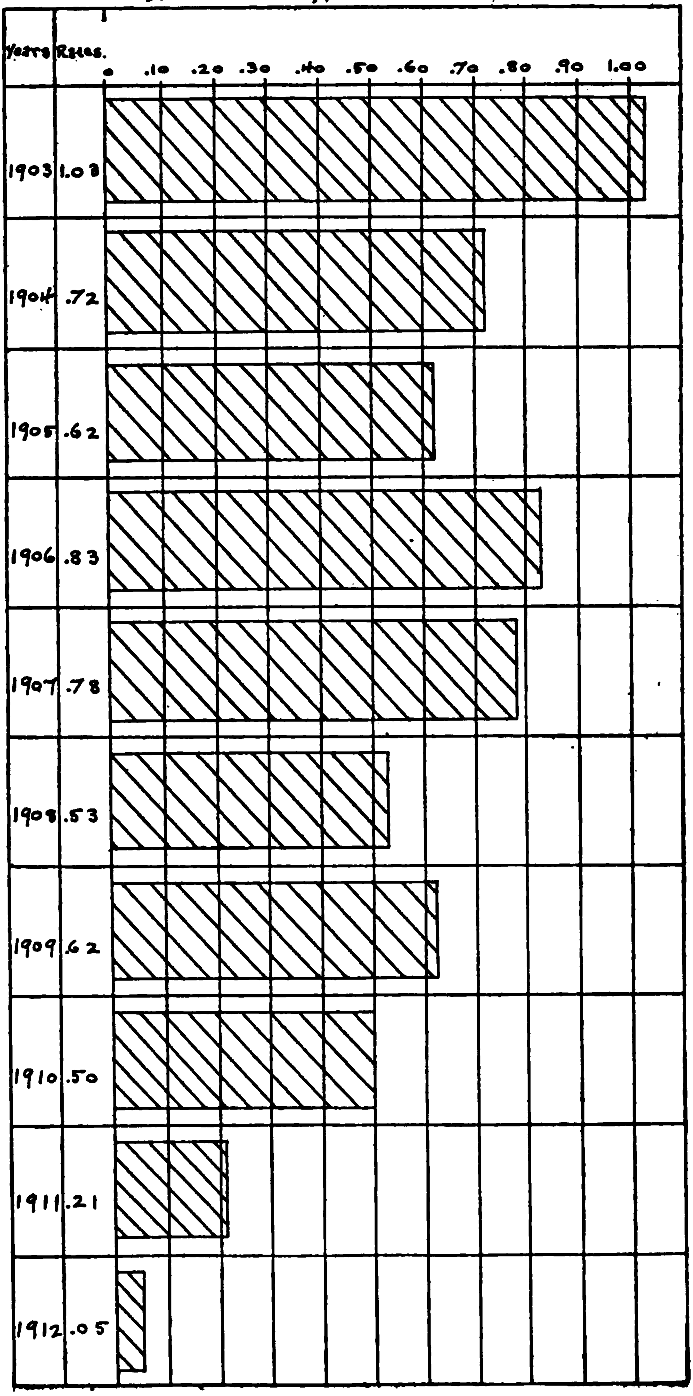
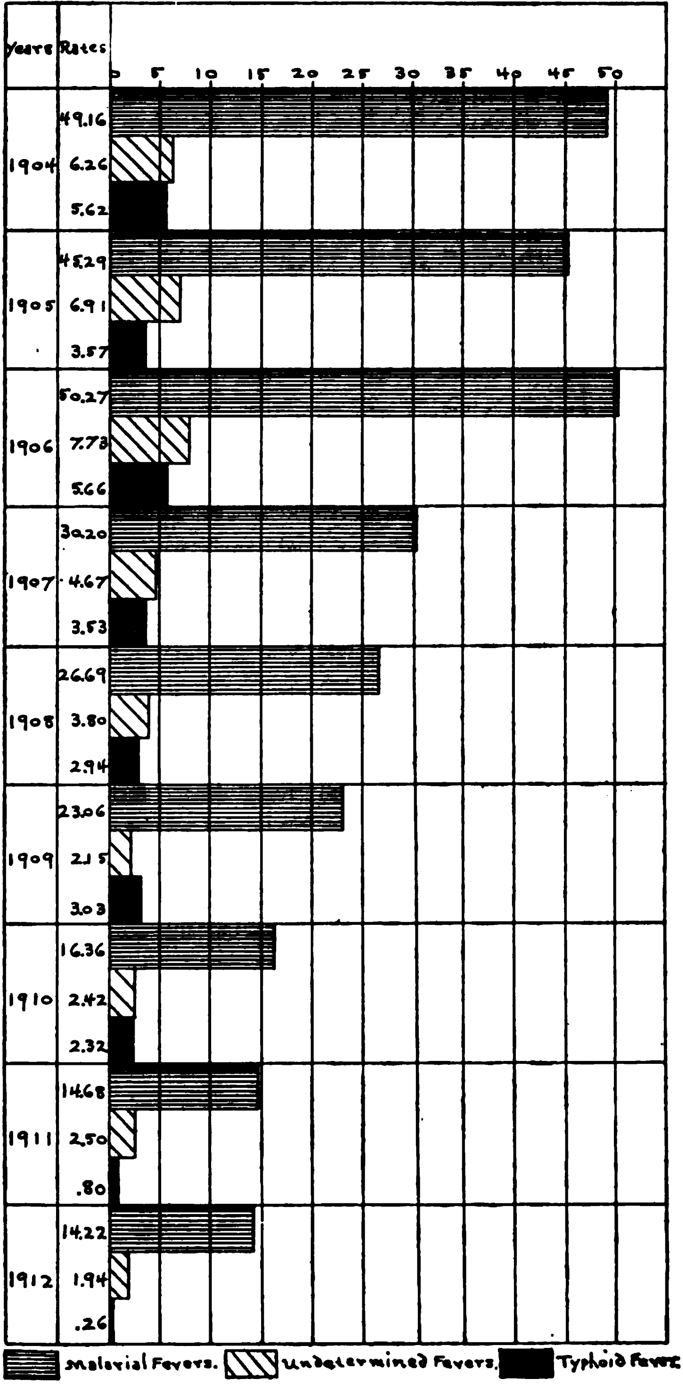


Chart R.

Malarial Fevers, Undetermined Fevers, Typhoid Fever.
Admission Rates.

Admission Rates for Malarial Fevers, Undetermined Fevers and Typhoid Fever for the United States, American Troops (Enlisted Men) 1904–1912.



not a single case has occurred in the Army stationed in the United States, Hawaii, Porto Rico, Panama, Alaska, or Philippine Islands. The last admission for this disease in an enlisted man was October 27, 1912. During the same period in 1912 in the United States there were 8 cases with 1 death, and in 1911, 24 cases with 5 deaths.

Reimmunizations with the typhoid prophylactic are now carried out upon reenlistment in the same way as revaccination against smallpox. The duration of the immunity is not yet known, but it is improbable that it is longer than that conferred by vaccinia against smallpox, and therefore reimmunization at the beginning of each enlistment period is believed to be necessary.

It is again recommended that when it may become necessary to mobilize either the militia or volunteer troops in the field that this measure be made compulsory for them. As was stated in the last report of this office, in case this is done it is believed that it will be impossible in future for large epidemics of typhoid fever to occur in the United States Army. An occasional case will develop, but typhoid fever will cease to be a scourge to the Army in the future as it was in the past, and will disappear even as smallpox has practically disappeared in armies as the result of vaccination. Among the sanitary achievements of the Medical Department in preventive medicine since the time of the Spanish-American War this sanitary measure for the prevention of typhoid fever should rank second in importance only to the discovery of the method of transmission of yellow fever.

VENEREAL DISEASES.

Four years ago, compelled by the fact that the venereal diseases were the only infectious diseases which showed no tendency to diminish and had become the greatest source of disability, this office began to urge the application to them of the principles of preventive medicine. The campaign was first taken up through the chief surgeons and post surgeons, suggesting that they enlist the interest and cooperation of commanding officers, and also suggesting the lines along which their activities should be directed, which were in general terms: (1) The encouragement of wholesome recreations at military posts which would keep soldiers from seeking amusement at vile resorts; (2) the instruction of the men by lectures and personal advice whenever opportunity offered as to the nature of venereal diseases, the extent of their prevalence among prostitutes, and the grave dangers caused by them, not only to the men infected but to their families; (3) the importance of early detection of cases of venereal diseases by periodical physical examinations of the men, and the importance of keeping cases under continuous observation and treatment until cured; (4) finally, approved measures of personal prophylaxis were suggested for those who would, contrary to advice, expose themselves to venereal infection. The widest latitude was given the medical officers as to the method of prophylaxis which should be employed, the importance of personal cleanliness was emphasized, and such medicinal preparations as were desired for personal disinfection after exposure were freely furnished.

For the last three years a report has been asked for through The Adjutant General from each post commander and post surgeon as to the success of the measures suggested, with a request for suggestions as to their improvement. The number of officers interested in this propaganda has steadily increased and through these reports the most practicable and efficient methods have been gradually evolved until last year for the first time the War Department was brought to see the necessity for official action, which was taken by General Order No. 17, dated May 31, 1912, published in full in the Annual Report of the Surgeon General for 1912. By this order the hospital method of personal prophylaxis for soldiers who had exposed themselves to venereal infection was formally adopted as the only one which was susceptible of enforcement by military authority.

The preventive measures to be taken under this order were described in detail in a circular of this office, which was, however, not published but furnished confidentially to medical officers through post commanders by the War Department. It is regretted that this circular was made confidential, because the efforts of the military authorities to check the venereal plague have not only caused no adverse criticism but have been followed by much sympathetic interest by sanitary officials and other persons interested in this aspect of municipal hygiene as well as those interested in the health and well-being of the Army, and this office has received many letters of inquiry as to the details of methods pursued and their success, which information it was somewhat difficult to give in detail on account of the confidential character given to it.

The stamp of official approval given by General Orders 17 to the campaign against venereal diseases was rendered more effective by action taken by Congress in the Army appropriation bill and published to the Army by General Orders 31, to stop the pay of officers and enlisted men in active service who should be absent from duty on account of disease resulting from their intemperate use of drugs or alcoholic liquors or other misconduct. The phrase "other misconduct" is understood and construed to refer to the contraction of venereal diseases. It was held by this office that this legislation constituted a modification of the enlistment contract and therefore was applicable to all enlisted men in active service, but the Judge Advocate General took the view, in which he was sustained by the comptroller, that the legislation was penal in character and therefore did not affect individuals whose misconduct, resulting in the contraction of venereal disease, had occurred prior to the date of approval of the act, August 24, 1912, or to those who contracted these diseases prior to enlistment. Although this construction has complicated the operation of the law by creating a privileged class of venereal patients to which the law does not apply, the number of such individuals will steadily diminish with the lapse of time, and it is almost the unanimous opinion of the Army that this legislation has been productive of great good. It is gratifying, therefore, to be able to report for the first time in a number of years a marked improvement in the venereal rates. This improvement is shown in all three of the venereal diseases and throughout the Army, although it has been more marked in the United States than in the Philippine Islands.

The following tables give the occurrence of venereal diseases in the Army by comparative rates for the past five years for each of these diseases in the United States. In these tables, as in the statistical tables in the back of this report, readmissions for the same venereal infection have not been counted for the year 1912, so that hereafter admissions will be synonymous with cases. Days lost on readmissions, however, have been counted in all cases in calculating days lost and the constantly sick rate.

TABLE No. 12.—*Venereal diseases, entire Army and United States proper, enlisted men, compared for years 1910, 1911, and 1912.*

	Entire Army (enlisted men).			United States proper (enlisted men).		
	1912	1911	1910	1912	1911	1910
Original admissions (cases) per 1,000 of mean strength	136.70	163.49	154.91	115.74	145.29	137.98
Constantly noneffective rate	7.78	10.14	11.51	5.96	8.82	10.14

TABLE No. 13.—*Venereal diseases—Admissions and discharges, Army, American troops (enlisted men), year 1912.*

	Mean strength.	Syphilis.				Chancroids.				Gonorrhea.				Total.			
		Admissions.		Discharges.		Admissions.		Discharges.		Admissions.		Discharges.		Admissions.		Discharges.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States	58,374	1,493	25.58	37	0.62	1,173	20.09	2	0.03	4,090	70.07	36	0.60	6,756	115.74	75	1.28
Alaska	1,197	9	7.52	1	.83	4	3.34			37	30.91			50	41.77	1	.83
Hawaii	3,376	138	40.88	4	1.18	89	26.36			188	55.69	5	1.48	415	122.93	9	2.67
Philippines	12,357	528	42.73	5	.40	832	67.32			1,719	139.11	9	.73	3,099	249.17	14	1.13
China	1,097	32	29.17			109	99.36			82	74.75			223	203.28		
Panama Canal Zone	773	10	12.94	1	1.29	25	32.34			18	23.29			53	68.56	1	1.29
Army transports	1,093	14	12.81			35	32.02			74	67.70			123	112.53		
Total	78,267	2,224	28.42	48	.60	2,267	28.96	2	.03	6,208	79.32	50	.63	10,699	136.70	100	1.28

	Total days.	Constantly sick.	Ratio per 1,000.
Syphilis	56,420	154.15	1.97
Chancroids	47,045	128.54	1.64
Gonorrhea	119,573	326.70	4.17
Total	223,038	609.39	7.79

TABLE No. 14.—*Venereal diseases, by years, 1908 to 1912, United States continental (excluding Alaska), enlisted men.*

[Ratio per 1,000 of mean strength.]

	Number of cases (after deducting recurrent admissions).	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
		Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Gonorrhea and results:													
1912[1]	70.07	70.07	69.87	74.36	0.60	0.61	0.40	0.02	0.02	....	3.26	3.27	2.94
1911	85.37	94.52	94.48	95.12	.79	.84	....	....	....	....	4.68	4.72	3.93
1910	91.22	102.44	102.17	107.17	.77	.78	.67	....	....	....	5.90	5.98	4.41
1909	105.86	125.27	124.49	147.37	1.36	1.34	2.08	....	....	....	7.22	7.23	7.02
1908	108.68	123.50	123.05	151.93	1.06	1.08	....	....	....	....	6.71	6.72	6.18
Chancroid:													
1912[1]	20.09	20.09	20.52	10.45	.03	.03	....	....	....	....	1.01	1.03	.50
1911	23.55	25.04	25.22	21.82	....	....	....	....	....	....	1.32	1.34	1.05
1910	24,23	26.42	25.83	36.84	....	....	....	....	....	....	1.53	1.51	1.86
1909	23.49	25.33	25.09	32.13	....	....	....	....	....	....	1.54	1.52	2.03
1908	26.49	28.20	27.64	63.54	.04	.02	1.32	....	....	....	1.75	1.71	4.38
Syphilis:													
1912[1]	25.58	25.58	25.84	19.69	.62	.61	.80	.03	.03	....	1.70	1.68	2.11
1911	36.37	44.30	45.33	25.91	.52	.48	1.36	.11	.11	....	2.82	2.85	2.30
1910	22.54	26.65	26.68	26.12	1.13	1.16	.67	.04	.04	....	2.71	2.75	2.07
1909	22.01	26.85	26.47	37.74	1.92	1.81	5.19	....	....	....	2.68	2.64	3.74
1908	19.99	23.15	22.46	66.30	1.62	1.64	....	.04	.04	....	2.17	2.14	3.46
Total venereal:													
1912[1]	115.74	115.74	116.24	104.50	1.26	1.26	1.21	.05	.05	....	5.96	5.98	5.55
1911	145.29	163.85	165.03	142.85	1.31	1.31	1.36	.11	.11	....	8.82	8.91	7.29
1910	137.98	155.51	154.69	170.13	1.90	1.94	1.34	.04	.04	....	10.14	10.25	8.34
1909	151.35	177.46	176.04	217.24	3.28	3.14	7.27	....	....	....	11.44	11.39	12.79
1908	155.17	174.84	173.14	281.77	2.73	2.75	1.38	.04	.04	....	10.63	10.57	14.02

[1] Recurrent admissions were not tabulated in year 1912.

It will be seen from these tables that the rate for venereal diseases (cases) for the United States, continental, was 115.74 per 1,000 for 1912, as compared with 145.29 for 1911. There were 516 cases of syphilis less than last year. In gonorrhea the number of cases is 626 less than last year, and in the local infection, chancroids, the diminution is 128. It was explained in the last report that the large increase in the number of cases of syphilis reported was ascribed to the improvements in diagnostic methods caused by the general use of the Wassermann test during 1912. In 1912 there was a large falling off in the number of secondary and tertiary cases of syphilis with a slight increase in the case rate for the primary cases. In comparing the figures for 1911 and 1912, and especially 1912, with the preceding years, it must be borne in mind that the diagnosis prior to 1911 was made without the advantage of the Wassermann reaction. These figures, therefore, include latent cases which are now detected by it, and which were largely missed prior to 1911. The slight increase in the rate for primary syphilis for 1912 was no doubt caused by the increased accuracy of diagnosis, due to the demonstration of the spirochaeta pallida in the early stages. Additional value is given to the venereal rates for 1912 by the fact that now under the operations of General Order 17, bimonthly physical examinations of troops are held throughout the Army and concealed cases which were in former years probably quite numerous are now reduced to a minimum. The fact that the total venereal rates in spite of these factors tending to swell them show a decided reduction over previous years must be regarded as an important achievement of preventive medicine.

TABLE No. 15.—*Syphilis, United States (continental), excluding Alaska, years 1908–1912, enlisted men.*

[Ratio per 1,000 of mean strength.]

Year.	Primary syphilis.			Secondary syphilis.			Tertiary syphilis.			Hereditary syphilis.			Total.		
	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.	Case rates.	Admission rates.	Noneffective rates.
1912[1]	3.89	3.89	0.18	19.01	19.01	1.20	2.50	2.50	0.31	0.17	0.17	0.01	25.58	25.58	1.70
1911	3.75	4.09	.26	28.66	35.54	2.14	3.64	4.29	.43	.33	.38	.02	36.37	44.30	2.85
1910	3.34	3.24	.23	17.26	19.96	2.00	1.83	2.01	.36	.11	.12	.01	22.54	25.83	2.60
1909	3.15	3.20	.24	17.09	21.67	2.17	1.75	1.96	.27	.02	.02	.0001	22.01	26.85	2.68
1908	2.46	2.57	.14	15.48	18.31	1.71	2.05	2.27	.31	......	......	......	19.99	23.15	2.17

[1] Recurrent admissions not tabulated in year 1912.

In studying the total venereal rate in the United States, continental, for 1912, by quarters, it is seen that the improvement has been progressive. Thus for the first quarter of the calendar year, before the issue of General Order 17, the admission rate was only slightly lower than that of the preceding year, being 130 per 1,000; for the second quarter it was 113; for the third quarter 107, and for the fourth quarter 91 per 1,000. This improvement has been continued into the year 1913.

The noneffective rate for the United States for 1912 is 5.96, as compared with 8.82 for 1911, 10.14 for 1910, and 11.44 for 1909. This rate is the true measure of noneffectiveness produced, and shows in a still more definite and satisfactory way the gain which has been accomplished.

By reference to Table No. 12 it will be seen that the rate for the total Army also showed a very material improvement. The admission rate in 1912 was 136.70, and in 1911, 163.49, while the noneffective rate was 7.78 in 1912 and 10.14 per 1,000 in 1911. As noted elsewhere, the rates in the Philippine Islands did not show as much improvement as the corresponding ones in the United States. The admission rate in the Philippine Islands in 1912 was 249.17 per 1,000, and in 1911, 305.12, while the noneffective rate was 16.55 in 1912 and 16.63 in 1911.

There were no colored troops in the Philippine Islands in 1910 and 1911; therefore the rates for these years are for white troops. The rate for white troops in 1912 was 215.43 per 1,000 for admissions, and 15.92 for noneffectiveness, while that for the colored troops was 524.06 per 1,000 for admissions with a noneffective rate of 21.70. It is thus apparent that the rates for the white troops showed a very satisfactory improvement, but that the rates for the colored troops were exceedingly high.

As above mentioned, The Adjutant General was asked in January to call for a report from the commanding officer of each post and military command as to the results obtained by General Order 17, 1912, with such remarks as to its operation and such suggestions as to improvement as might seem desirable. A study of these reports from 95 posts (some of the smaller posts and arsenals having been omitted) shows that at 69 posts the surgeon thought that the measures taken had been effective in reducing venereal diseases. In 14 the results were stated to be fair or slight, and in 12 they were stated as not effective. Five of these latter were Coast Artillery posts, at which it was stated that the distance and location of the garrison from the neighboring town was such that it was impossible for men after venereal exposures in town to present themselves for prophylactic treatment within a reasonable length of time and that consequently the treatment was not effective. At the other posts at which the answer was negative it was explained by the statement that the men did not report, or in some cases what was probably a different and more accurate way of stating the same fact, that the officers were indifferent. A study of these reports and the great contrast in the results obtained at posts where commanding officers and surgeons are enthusiastic and optimistic makes it certain that the failure of the men to comply with the provisions of General Order 17 is in direct proportion to the indifference and pessimism of post and organization commanders and post surgeons. The great change that has taken place in the venereal statistics of the recruit depots, excepting Fort Logan, Colo., shown in Table No. 16, is a conclusive evidence of what can be accomplished by an enthusiastic determination to enforce orders and obtain results.

TABLE No. 16.—*Recruit depots—Total number of admissions, venereal diseases, with ratios and mean strength, officers and enlisted men, years 1910, 1911, and 1912.*

Recruit depots.	Year 1910.			Year 1911.			Year 1912.		
	Admissions.		Mean strength.	Admissions.		Mean strength.	Admissions.		Mean strength.
	Total.	Ratio.		Total.	Ratio.		Total.	Ratio.	
Fort Slocum, N. Y	177	178.79	990	425	338.92	1,254	196	151.12	1,297
Jefferson Barracks, Mo	319	318.36	1,002	324	263.63	1,229	165	134.80	1,224
Columbus Barracks, Ohio	338	317.07	1,066	312	240.93	1,295	167	139.75	1,195
Fort McDowell, Cal	163	270.76	602	207	253.06	818	78	115.21	677
Fort Logan, Colo	63	121.39	519	162	274.58	590	149	230.65	646

TABLE No. 17.—*Venereal diseases—Officers and enlisted men, admissions and ratios per 1,000, for posts of more than 300 men, in the United States (excluding Alaska), year 1912.*

		Relative standing on list previous year.[1]	Admissions.		Mean strength.
			Total.	Ratio.	
1	Fort McPherson, Ga	1	220	289.09	761
2	Fort Washington, Md	6	108	216.43	499
3	Fort Sam Houston, Tex	4	228	210.53	1,083
4	Fort Oglethorpe, Ga	8	177	209.47	845
5	Fort Benjamin Harrison, Ind	....	145	194.89	744
6	Fort Snelling, Minn	2	184	179.69	1,024
7	Madison Barracks, N. Y	40	91	170.09	535
8	Fort Moultrie, S. C	18	76	159.00	478
9	Presidio of San Francisco, Cal. (post)	14	302	151.92	1,988
10	Fort Howard, Md	9	61	133.77	456
11	Fort Andrews, Mass	15	57	132.25	431
12	Fort Dupont, Del	38	73	130.36	560
13	Fort George Wright, Wash	29	70	125.45	558
14	Fort Strong, Mass	....	47	125.00	376
15	Fort Douglas, Utah	36	108	123.29	876
16	Fort Sill, Okla	12	119	121.43	980
17	Fort Screven, Ga	3	56	120.95	463
18	Fort Meade, S. Dak	....	56	119.15	470
19	Fort Morgan, Ala	22	52	118.45	439
20	Fort Clark, Tex	46	47	117.21	401
21	Fort Williams, Me	35	69	115.38	598
22	Fort Bliss, Tex	11	65	114.64	567
23	Monterey, Cal	24	97	114.12	850

[1] NOTE.—A difference of one below "16" is made in the relative standing on account of dropping out Schofield Barracks, Hawaii.

TABLE No. 17.—*Venereal diseases—Officers and enlisted men, admissions and ratios per 1,000, for posts of more than 300 men, in the United States (excluding Alaska), year 1912*—Continued.

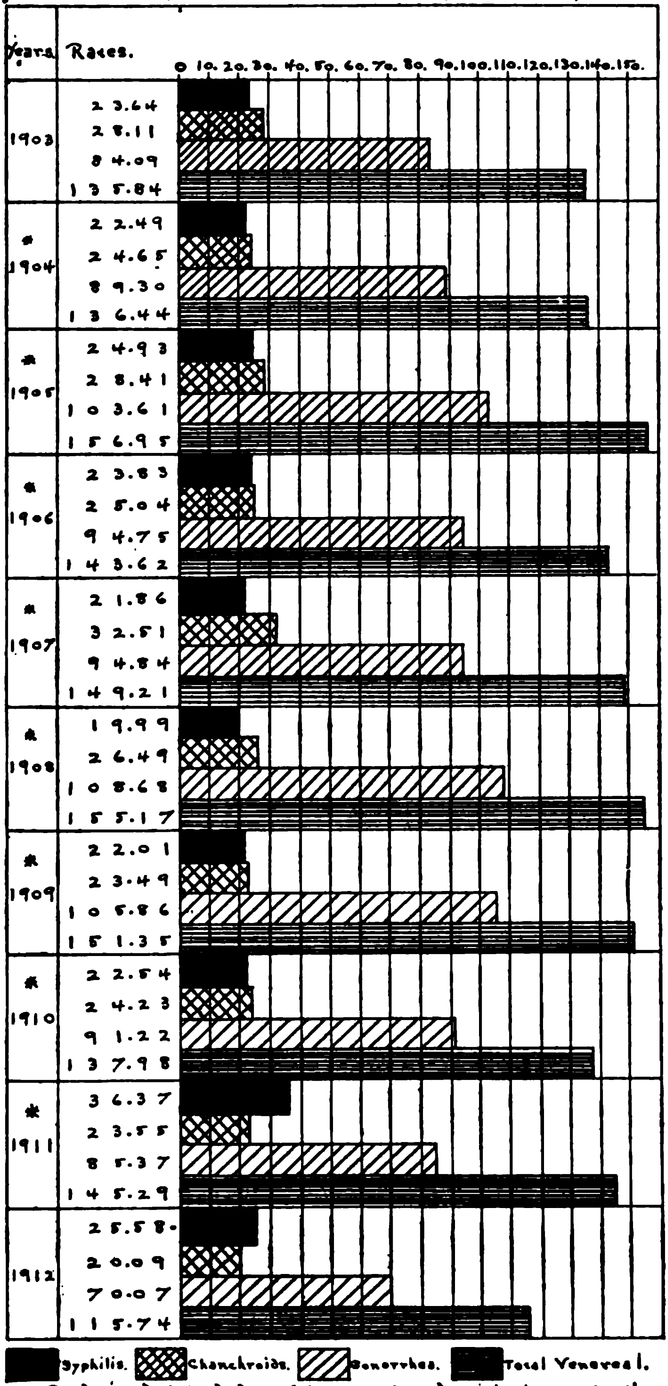
		Relative standing on list previous year.	Admissions.		Mean strength.
			Total.	Ratio.	
	UNITED STATES (officers and enlisted men)	....	6,769	110.24	61,406
24	Fort Barrancas, Fla	5	61	109.52	557
25	Fort Leavenworth, Kans	26	228	108.16	2,108
26	Fort Ethan Allen, Vt	34	86	107.63	799
27	Fort Monroe, Va	20	146	106.65	1,369
28	Fort Sheridan, Ill	30	129	106.17	1,215
29	Fort D. A. Russell, Wyo	7	243	105.01	2,314
30	Fort McKinley, Me	17	79	104.22	758
31	Vancouver Barracks, Wash	43	141	102.92	1,370
32	Fort Jay, N. Y	27	42	102.69	409
33	Fort Wayne, Mich	13	54	101.50	532
34	Fort Stevens, Oreg	51	33	99.70	331
35	Fort William H. Harrison, Mont	21	35	98.87	354
36	Fort Des Moines, Iowa	....	72	98.63	730
37	Fort Huachuca, Ariz	23	33	94.56	349
38	Plattsburg Barracks, N. Y	45	77	94.25	817
39	Fort Riley, Kans	39	183	93.60	1,955
40	Fort Terry, N. Y	48	65	91.29	712
41	Fort H. G. Wright, N. Y	32	61	89.05	685
42	Fort Totten, N. Y	25	65	84.53	769
43	Fort Winfield Scott, Cal	....	49	80.20	611
44	Fort Myer, Va	31	54	75.63	714
45	Fort Baker, Cal	33	30	75.57	397
46	Fort Lincoln, N. Dak	....	23	73.96	311
47	Washington Barracks, D. C	37	48	73.96	649
48	Fort Worden, Wash	57	44	68.32	644
49	Fort Flagler, Wash	52	21	67.52	311
50	Fort Casey, Wash	47	21	66.04	318
51	Fort Caswell, N. C	28	22	65.28	337
52	Fort Hancock, N. J	42	48	64.09	749
53	Fort Mackenzie, Wyo	49	35	61.40	570
54	Fort Hamilton, N. Y	16	35	61.30	571
55	Fort Adams, R. I	44	31	54.58	568
56	Fort Lawton, Wash	41	18	51.14	352
57	Fort Greble, R. I	56	16	48.78	328
58	Fort Crook, Nebr	10	25	47.98	521
59	Fort Robinson, Nebr	50	28	47.62	588
60	Fort Barry, Cal	....	15	47.02	319
61	West Point, N. Y	54	28	35.71	784
62	Fort Yellowstone, Wyo	53	11	27.78	396

TABLE No. 18.—*Venereal diseases—Army, officers and enlisted men, by departments and divisions, year 1912.*

	Mean strength.			Cases.			Rates per 1,000 of mean strength.		
	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.	Officers.	Enlisted men.	Total.
Army—American troops	4,216	78,267	82,483	22	10,699	10,721	5.22	136.70	129.98
United States (continental), excluding Alaska	3,031	58,374	61,406	13	6,756	6,769	4.29	115.74	110.24
Eastern division	1,070	20,343	21,413	4	2,479	2,483	3.74	121.86	115.96
Central division	1,043	19,226	20,269	3	2,183	2,186	2.88	113.54	107.85
Western division	584	11,904	12,488	3	1,190	1,193	5.14	99.97	95.53
Independent stations	186	1,457	1,643	....	69	69	....	47.36	42.00
Recruit depots	110	4,929	5,039	....	755	755	....	153.18	149.83
General hospitals	38	515	553	3	80	83	78.95	155.34	150.09
Alaska	54	1,197	1,251	....	50	50	....	41.77	39.97
Panama Canal Zone	34	773	807	....	53	53	....	68.56	65.68
Hawaii	173	3,376	3,549	....	415	415	....	122.93	116.93
China	44	1,097	1,141	....	223	223	....	203.28	195.44
Philippine Islands (American troops)	758	12,357	13,115	9	3,079	3,088	11.87	249.17	235.46
Department of Luzon	528	9,186	9,714	5	2,512	2,517	9.47	273.46	259.11
Department of Mindanao	216	3,053	3,269	3	452	455	13.89	148.05	139.19
Division hospital	10	97	107	1	104	105	100.00	1,072.17	981.31
Interisland transports	4	21	25	....	11	11	....	523.81	440.00
Army transports	81	1,093	1,174	....	123	123	....	112.53	104.77
Philippine Scouts	....	5,407	5,407	....	301	301	....	55.67	55.67
Porto Rican regiment	41	588	629	....	62	62	....	105.44	98.57

Chart S.

Syphilis, Chanchroids, Gonorrhea and Total Venereal.
Admission Rates.
Admission Rates for Syphilis, Chanchroids, Gonorrhea and Total Venereal for the United States, American Troops (Enlisted Men) years, 1903-1912.

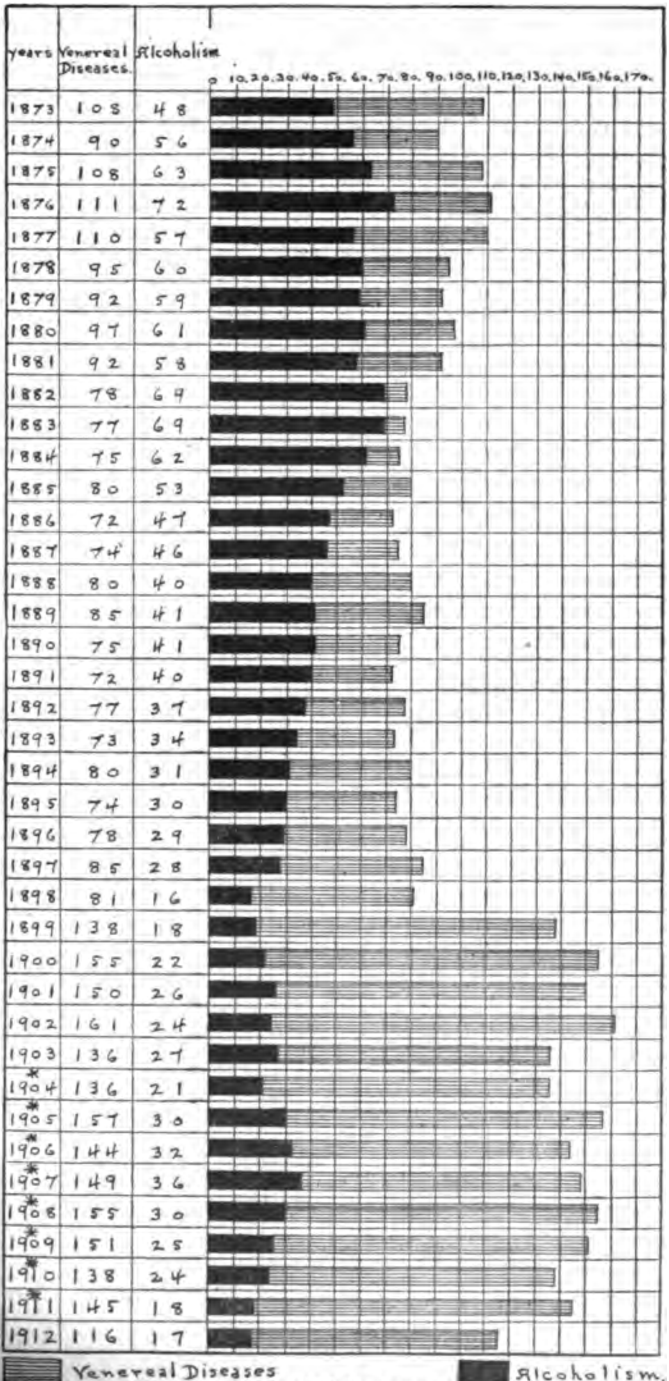


* Readmitted cases deducted to correspond with figures for the years preceding 1904.

Chart T.

Venereal Diseases and Alcoholism.
Admission Rates.

Admission Rates for Venereal Diseases and Alcoholism for the United States, American Troops (Enlisted Men) years, 1873–1912.



years	Venereal Diseases.	Alcoholism
1873	105	48
1874	90	56
1875	108	63
1876	111	72
1877	110	57
1878	95	60
1879	92	59
1880	97	61
1881	92	58
1882	78	69
1883	77	69
1884	75	62
1885	80	53
1886	72	47
1887	74	46
1888	80	40
1889	85	41
1890	75	41
1891	72	40
1892	77	37
1893	73	34
1894	80	31
1895	74	30
1896	78	29
1897	85	28
1898	81	16
1899	138	18
1900	155	22
1901	150	26
1902	161	24
1903	136	27
*1904	136	21
*1905	157	30
*1906	144	32
*1907	149	36
*1908	155	30
*1909	151	25
*1910	138	24
*1911	145	18
1912	116	17

* Readmitted cases deducted to correspond with figures for years preceding 1904, and 1912.

Table No. 17 shows the venereal rates at all of the more important military posts in the United States, and an examination of it in comparison with the similar table for last year indicates the extent of the improvement which has been effected. For example, only 9 posts show a rate higher than 135 per 1,000, whereas last year the number showing a rate above 135 was 31. Fort McPherson, which had the bad eminence of being the first on the list in 1911 as well as 1912, had a rate for the former of 465 as compared with 289 for the latter.

In spite of the great improvement in these rates it is believed that the posts at the head of the table have rates which are far too high and which could be greatly reduced by the more careful carrying out of the provisions of General Order 17. This office has, therefore, called the attention of the War Department to those posts having a rate above 150 per 1,000 and has requested that the department commanders be asked to investigate the reasons for their failure to show a marked improvement.

It is believed, therefore, that the time has come to hold commanding officers responsible for excessive venereal rates occurring at their posts, and especially for continued failure on the part of the men of the command to comply with the existing orders on the subject. If this were done and if the officers of the Inspector General's Department and the sanitary inspectors had orders to investigate strictly the results obtained at posts inspected by them and to make special reports in cases where these results are not satisfactory, there is no doubt that a great and permanent improvement could be effected. It is also recommended that post exchanges be required to keep on hand for sale at a cost not to exceed 5 cents each prophylactic packets for the use of men of immoral habits who are going on passes or furloughs under such circumstances as would render prophylactic treatment at the hospital useless on account of the period of time intervening between exposure and the treatment.

RATES FOR 1913.

The figures compiled in this office for all posts in the United States for the first six months of 1913 show that the marked improvement begun in 1912 has continued in 1913. The annual rate for the United States for the first six months of 1913 was 74.67 per 1,000 for all venereal diseases, that for syphilis being 19.84, for gonorrhea 43.00, and for chancroids 11.82. By reference to Chart T it will be observed that this is the lowest rate for venereal disease since 1895. This rate includes all cases occurring, not only all those excused from duty but those taken up for record only, as well as all concurrent cases. The following table shows the number of cases of each disease, with rates:

Venereal diseases—January to June, 1913, United States, continental (exclusive of Alaska).

	Cases on sick report.		Concurrent cases.		Cases for record only (no time lost).		Total.	
	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.
Syphilis	527	16.98	....	....	89	2.87	616	19.84
Chancroid	249	8.02	15	0.48	103	3.32	367	11.82
Gonorrhea	950	30.60	15	.48	370	11.92	1,335	43.00
Total	1,726	55.60	30	.97	562	18.10	2,318	74.67

MALARIAL FEVERS.

The occurrence of malarial fever in the United States, as shown by Chart U, continues to decrease. The admission rate for 1912 was 14.22, as compared with 14.68 for 1911, 16.36 for 1910, 23.06 for 1909, and 26.69 for 1908, which in its turn was the lowest on record in this office. This continuous improvement is to be credited not alone to the efforts of medical officers, supported by commanding officers, but also to the liberal provision of wire-gauze screens for doors and windows by the Quartermaster's Corps. The noneffective rate was 0.30 per 1,000, as compared with 0.35 in 1911, 0.36 in 1910, 0.51 in 1909, and 0.58 in 1908.

Table No. 19 shows the relative incidence of the various forms of malarial infection for the past five years. Not a single death has occurred in the Army in the United States from malarial fever since 1906.

TABLE No. 19.—*Malarial infections—United States, continental (excluding Alaska), years 1908 to 1912, inclusive, enlisted men.*

[Ratio per 1,000 of mean strength.]

Malarial fevers.	Admitted.			Discharged on certificate of disability.			Died.			Noneffective.		
	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.
Quartan and tertian:												
1912	12.42	12.89	2.01							0.24	0.25	0.04
1911	13.63	14.36	.68							.29	.30	.01
1910	14.57	15.18	3.68							.28	.29	.06
1909	20.29	20.74	7.65							.41	.42	.13
1908	24.12	24.33	11.05							.49	.49	.14
Estivo-autumnal:												
1912	.96	1.00								.03	.03	
1911	.89	.94								.04	.04	
1910	1.36	1.39	1.00							.06	.06	.03
1909	1.96	1.99	1.02							.07	.07	.03
1908	2.09	2.11	1.38							.08	.08	.04
Malarial cachexia and undetermined malarial fevers:												
1912	.84	.77	2.41							.02	.02	.02
1911	.16	.17								.02	.02	
1910	.43	.46								.03	.03	
1909	.80	.83		0.02	0.02					.04	.04	
1908	.47	.48								.01	.01	
Total malarial diseases:												
1912	14.22	14.65	4.42							.30	.31	.06
1911	14.68	15.47	.68							.35	.36	.01
1910	16.36	17.02	4.69							.36	.37	.09
1909	23.06	23.57	8.67	.02	.02					.51	.53	.16
1908	26.69	26.91	12.43							.58	.59	.18

TABLE No. 20.—*The 10 posts of more than 200 (officers and men) in the United States having the highest admission rates for malarial diseases, 1912 compared with 1911.*

[Ratio per 1,000 of mean strength.]

Posts.	Mean strength.		Malarial diseases—total ratio.	
	1912	1911	1912	1911
Fort Washington, Md	499	420	172.34	333.33
Fort Logan H. Roots, Ark	264	279	90.91	60.93
Jefferson Barracks, Mo	1,224	1,229	90.69	25.22
Washington Barracks, D. C	649	658	84.75	185.41
Fort Bliss, Tex	567	381	58.21	5.25
Fort Clark, Tex	401	301	54.86	16.61
Fort Howard, Md	456	406	46.05	56.65
Fort Caswell, N. C	337	323	38.58	37.15
Fort Crockett, Tex	234	122	38.46	24.59
Fort Ontario, N. Y	205	211	34.15	....

Fort Washington this year, as for the last several years, has the unenviable reputation of having the highest admission rate for any post in the United States. The rate in 1912 was 172.34 per 1,000 as compared with 333.33 in 1911, 237.29 for 1910, 215.77 for 1909, 144.30 for 1908, 363.64 for 1907, and 736 for 1906. The rate was thus lower than it has been since 1908. The surgeon at this post states, that up to November, 1912, very little of the work recommended by the board for the special study of the subject mentioned in the last report of this office had been done. In the latter part of November the commanding officer issued an order that two companies of the Coast Artillery Corps should be put on fatigue duty five days each week, for the purpose of clearing the ground. An area 125 yards wide was cleared around the entire post. After March 12, 1913, the work being practically complete, the fatigue party was reduced to one company. By May 1 the work was completed. He states that during May, June, and July of this year the cleared area has been kept as clear as possible of undergrowth by prison labor.

In June and July, 1913, the herd of goats recommended by the board was purchased, apparently, however, too late to accomplish any result this year as the undergrowth by this time was too far advanced to be kept down by them.

A search for mosquitoes is made through each barrack building every day by the entire company and all mosquitoes killed. All cases of malarial fevers are carefully protected from mosquitoes and after discharge from hospital are kept under careful observation and treatment for several months. The surgeon reports that:

> At present there are practically no mosquitoes on the reservation, and I believe if we can prevent the men from prowling over the country and getting bitten by infected mosquitoes we can blot out malaria completely at Fort Washington.

The rate for the first six months of 1913, as compared with the corresponding rate for 1911 and 1912 was—

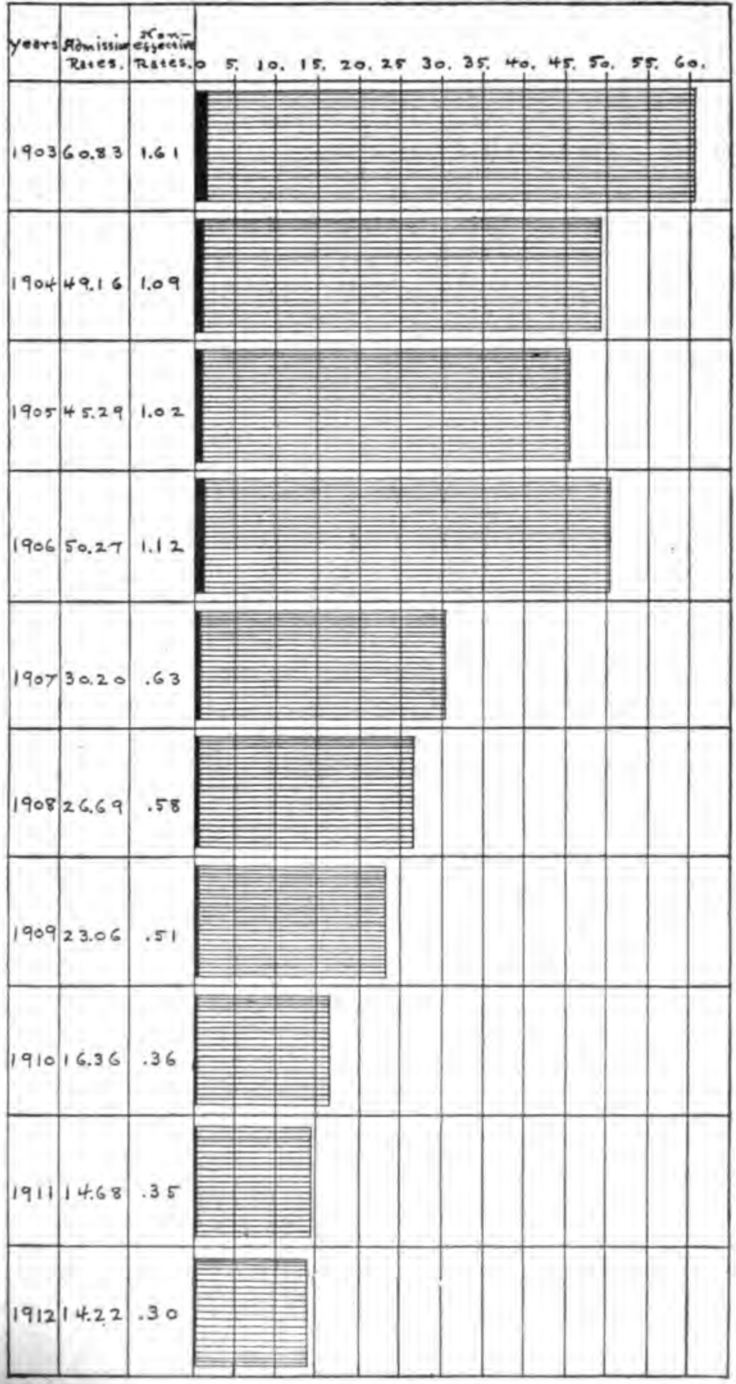
First six months:	
1911	39.77
1912	136.20
1913	16.60

This indicates that the work done is producing good results, though very little inference can be drawn from the figures for the first six months.

Chart U.

Malarial Fevers.
Admission and Noneffective Rates.

Admission and Noneffective Rates for Malarial Fevers for the United States, American Troops (Enlisted Men) years, 1903–1912.



Years	Admission Rates.	Non-effective Rates.
1903	60.83	1.61
1904	49.16	1.09
1905	45.29	1.02
1906	50.27	1.12
1907	30.20	.63
1908	26.69	.58
1909	23.06	.51
1910	16.36	.36
1911	14.68	.35
1912	14.22	.30

The total admission rate for malarial fevers for the Army was 40.00. The comparative rate for 1911 was 25.18, and for 1910 was 28.99. This increase in the rate for American troops, total Army, when there was a decrease for the rate in the United States, is due to the as yet unexplained marked increase in the rate for the Philippine Islands, the rate there for American troops being 171.00 as compared with 75.56 for 1911. The rate in the Philippines in 1912 was higher than it has been in any year since 1906, when it was 304.20. This increase can be attributed to a certain extent to the large amount of field service which the troops have had in the district of Mindanao. This, however, can not explain the general increase in rate, for with the exception of Fort Mills, Warwick Barracks, and Torrey Barracks, there was an increase in the rate at every post in the Philippines occupied by American troops. The Scouts, who were as actively engaged in field service as the American troops, showed a slight decrease over last year, the rate for 1912 being 241.91 as compared with 242.12 per 1,000 for 1911.

A cablegram calling the attention of the commanding general, Philippine Department, to this marked increase in the malarial rate, and indicating the necessity of increased attention to this matter by medical officers, was sent by The Adjutant General on June 30 at the request of this office.

TUBERCULOSIS.

The following tabulation shows for the total American Army, and separately for the different countries where the Army has been stationed continually, the case rate for tuberculosis (all) for enlisted men for the last five years. In this tabulation all readmissions during each year have been eliminated, so that the actual occurrence of tuberculosis (all) is shown.

Tuberculosis (all)—Enlisted men cases only.

Year.	United States.	Philippine Islands.	Alaska.	Hawaii.	Transports.	Total.
1912	3.25	5.02	4.18	2.07	2.74	3.49
1911	3.64	3.77	2.68	1.99	1.76	3.55
1910	3.34	5.46	1.85	4.10	0.80	3.66
1909	4.53	5.06	3.76	2.96	3.00	4.53
1908	3.99	6.10	2.96	3.92	3.46	4.39

It is extremely interesting to note that the case rate for the total Army, and for that part stationed in the United States and the Philippine Islands, has steadily diminished year by year during the last five years, the only exception being that the rate for the Philippine Islands was higher in 1912 than in 1911 when it was abnormally low, and the slight variation from year to year in previous years in the rate for the United States. This decrease is no doubt due to improved sanitation and to the care with which applicants for enlistment are examined at recruiting depots. Owing to the small average number of men in Alaska, Hawaii, and on transports, the figures for these places are of small value. For Hawaii, however, the rate for 1912 is below the average for the last five years, and that for the transports is lower than for two out of the other four years.

The following tabulation shows for the total American Army, and for that part stationed in the United States and the Philippine Islands, the rate for tuberculosis (all), for discharges for disability, for deaths, and noneffectiveness for the last three years.

	Year.	Discharged for disability.	Deaths.	Noneffective.
Army, American troops	1912	1.56	0.31	1.40
	1911	2.88	.44	1.35
	1910	4.02	.23	1.60
American troops, United States	1912	1.67	.27	1.65
	1911	2.85	.52	1.63
	1910	4.01	.25	1.87
American troops, Philippine Islands	1912	1.46	.57	.53
	1911	3.77	.08	.29
	1910	4.54	.41	.41

An examination of Table No. 21 showing the occurrence of tuberculosis at Army posts in the United States, shows that Vancouver Barracks had the highest rate in 1912 as in 1911.

TABLE No. 21.—*Tuberculosis (all) at Army stations, United States, continental (excluding Alaska), year 1912, compared with 1911 and 1910, enlisted men.*

	Admissions.					
	1912		1911		1910	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Vancouver Barracks, Wash	23	17.58	22	21.96	9	7.98
Fort Slocum, N. Y	11	8.64	3	2.44	7	7.24
Fort Sam Houston, Tex	10	9.65	5	3.10	4	2.51
Columbus Barracks, Ohio	8	6.83	6	4.72	5	4.80
Jefferson Barracks, Mo	8	6.66	2	1.66	5	5.10
Presidio of Monterey, Cal	7	8.86	1	1.32	2	2.10
Presidio of San Francisco, Cal	7	3.66	11	5.60	13	5.42
Fort McDowell, Cal	6	9.13	6	7.52	1	1.72
Fort Leavenworth, Kans	5	2.52	2	1.63	3	1.55
Fort Andrews, Mass	4	9.52	1	2.39	1	2.55
Fort Benjamin Harrison, Ind	4	5.71	1	5.59	6	7.70
Fort D. A. Russell, Wyo	4	1.83	7	4.29	8	3.48
Fort Flagler, Wash	4	13.25	1	3.18	1	3.08
Fort Hancock, N. J	4	5.51	....	....	1	1.19
Fort Barry, Cal	3	9.65	....	....	2	6.62
Fort Jay, N. Y	3	8.17	1	3.39	2	6.35
Fort McPherson, Ga	3	4.12	....	....	....	....
Fort Riley, Kans	3	1.61	2	1.10	2	1.04
Walter Reed General Hospital, Takoma Park, D. C	3	19.11	3	21.43	1	7.81
Letterman General Hospital, San Francisco, Cal	....	....	11	41.20	9	31.47
General Hospital, Fort Bayard, N. Mex	1	7.81	8	64.00	7	56.91
Fort Hamilton, N. Y	....	....	5	11.06	2	3.82
Fort Baker, Cal	2	5.18	4	10.84	5	11.79
Madison Barracks, N. Y	....	....	4	8.06	....	....
Fort Adams, R. I	1	1.81	3	5.43	1	1.61
Fort Barrancas, Fla	2	3.71	3	6.45	2	3.48
Fort Du Pont, Del	1	1.84	3	7.21	3	5.70
Fort Ethan Allen, Vt	2	2.65	3	3.88	1	1.43
Fort George Wright, Wash	1	1.89	3	6.40	1	2.42
Fort Lincoln, N. Dak	....	....	3	11.67	3	15.63
Fort Logan, Colo	2	3.19	3	5.24	....	....
Fort Mackenzie, Wyo	2	3.68	3	8.77	1	2.08
Fort McIntosh, Tex	2	8.30	3	9.49	....	....

TABLE No. 21.—*Tuberculosis (all) at Army stations, United States, continental (excluding Alaska), year 1912, compared with 1911 and 1910, enlisted men*—Continued.

	Admissions.					
	1912		1911		1910	
	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.	Number.	Ratio per 1,000 of mean strength.
Fort Oglethorpe, Ga	1	1.25	3	9.84	2	2.99
Fort Totten, N. Y			3	4.72	1	1.38
Fort Myer, Va	2	2.93	2	3.07	4	4.97
Fort Porter, N. Y	2	10.99	2	8.73	3	12.15
Fort Monroe, Va	1	.81	1	.93	5	4.09
Fort Robinson, Nebr	2	3.60	1	2.15	4	8.68
Fort Snelling, Minn			1	2.17	4	3.99
Alcatraz Island, Cal					3	18.63
Boise Barracks, Idaho					3	25.42
Fort Des Moines, Iowa	1	1.45			3	4.95
Fort Thomas, Ky					3	6.40
Washington Barracks, D. C					3	5.58
9 posts not included above had 2 cases each, 1912	18					
13 posts not included above had 2 cases each, 1911			26			
12 posts not included above had 2 cases each, 1910					24	
19 posts not included above had 1 case each, 1912	19					
13 posts not included above had 1 case each, 1911			13			
16 posts not included above had 1 case each, 1910					16	
Field, miscellaneous	8		30		10	
Total	190	3.25	215	3.89	196	3.52

On account of the large number of cases reported at Vancouver Barracks in September, 1912, Col. George E. Bushnell, Medical Corps, was directed to proceed there and to make a thorough investigation. He reported in part as follows:

In compliance with the requirements of this communication I left for Vancouver Barracks by the first available train on September 7, arriving at that post on September 10. Upon inquiry it appeared that the garrison was in a state of mind bordering upon panic. The idea prevailed that a very considerable number of soldiers had been infected with pulmonary tuberculosis and that the disease was the result of a place infection. Such a condition, if it really prevailed, was not only exceedingly serious in its results to the military service but also was unprecedented in the history of medicine, at least as regards the number of cases supposed to be implicated. My first endeavor, therefore, was to examine the cases of supposed tuberculosis, upon which work I entered on the morning of September 11.

The wisdom of the course pursued in examining the cases on hand before beginning the study of the epidemic was apparent, for on completion of my examination the epidemic had vanished. Of the 16 cases examined but 7 presented any evidence of disease. Of these 7 W. had pleurisy; M.'s diagnois was not made; L. had laryngitis; leaving 4 cases with doubtful signs which may or may not mean tuberculosis. Not one case was found with frank undisguised pulmonary tuberculosis.

In addition to these 16 cases there were a large number of cases in which physical examination made in a routine way of the command had discovered what were supposed to be suspicious signs. The men, however, had not been admitted to sick report and were simply listed as suspicious for further examination. After witnessing the results of my examination of the foregoing cases the surgeon advised that they be not examined. I agreed with him that it would be a waste of time.

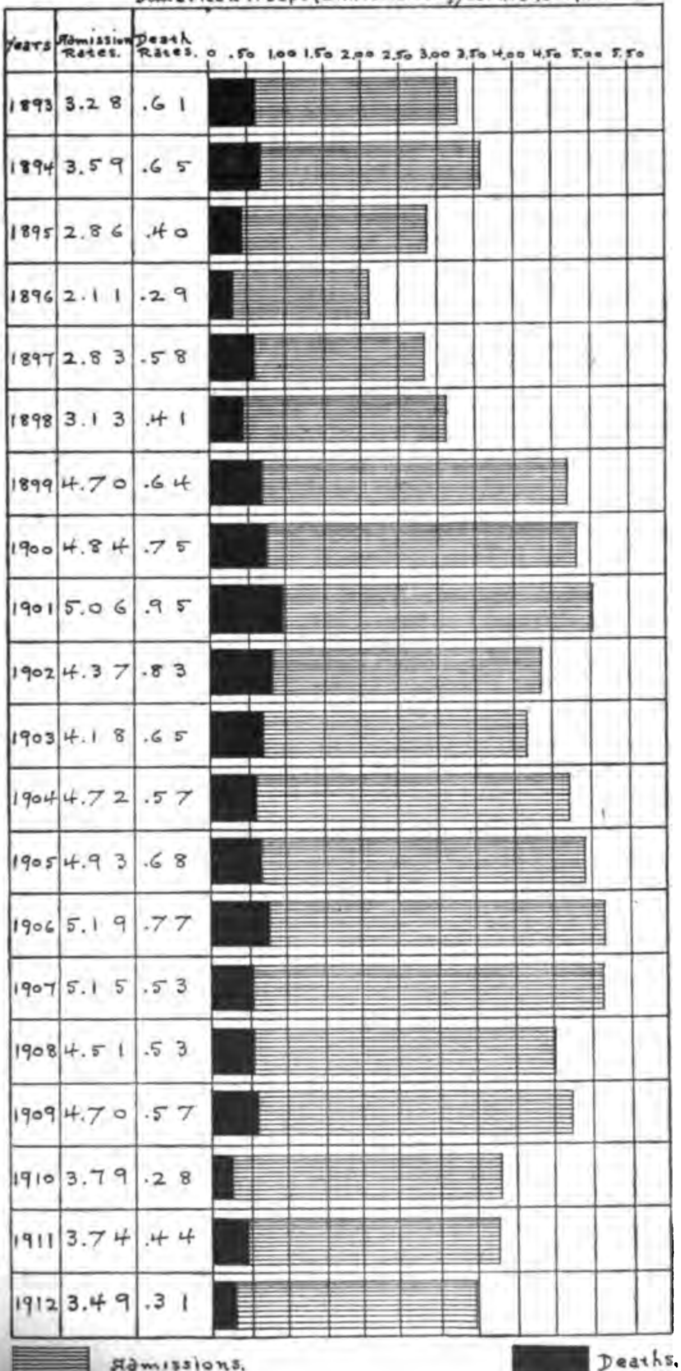
Of the 26 cases diagnosticated as pulmonary tuberculosis at Vancouver Barracks in only a fraction was the sputum found positive for tubercle bacilli. This fact in itself would excite suspicion as to the accuracy of the diagnosis, but that opinion should be held in reserve, for of 10 cases from Vancouver Barracks, in which the

Chart V.

Tuberculosis.

Admission and Death Rates.

Admission and Death Rates for Tuberculosis for the Army.
American Troops {Enlisted Men} years 1893-1912.



Years	Admission Rates.	Death Rates.
1893	3.28	.61
1894	3.59	.65
1895	2.86	.40
1896	2.11	.29
1897	2.83	.58
1898	3.13	.41
1899	4.70	.64
1900	4.84	.75
1901	5.06	.95
1902	4.37	.83
1903	4.18	.65
1904	4.72	.57
1905	4.93	.68
1906	5.19	.77
1907	5.15	.53
1908	4.51	.53
1909	4.70	.57
1910	3.79	.28
1911	3.74	.44
1912	3.49	.31

▤ Admissions. ■ Deaths.

diagnosis of pulmonary tuberculosis was made at Fort Bayard, in 5 the sputum has remained negative, though examined repeatedly (in 1 case forty-four times). It is not uncommon to find cases of undoubted pulmonary tuberculosis with profuse, purulent expectoration, in the sputum of which the tubercle bacilli are found with the greatest difficulty. Such cases the writer regards as complicated by a nontuberculous bronchitis which produces such quantities of pus that the tubercle bacilli are, as it were, lost in its abundance. When this is the explanation the bacilli are usually to be found by the antiformin method. When that method fails, as it has in the above 5 cases, the absence of the bacilli seems inexplicable if active tuberculosis is really present. In another class of tuberculous cases in which the sputum is scanty and mucous, the explanation of the absence of tubercle bacilli is the arrest of the tuberculous process sufficiently to shut off the lesion from the bronchi, so that tubercle bacilli no longer escapes from it. The 5 cases under consideration do not belong to the second class. They have all, at one time at least, had abundant purulent expectoration and sufficient time has not elapsed to arrest their lesions. The continued absence of tubercle bacilli casts doubts, in the opinion of the writer, upon the tuberculous nature of their affection. It should, however, be stated in this connection that it is believed that the sputum of G. was found positive for tubercle bacilli at Vancouver Barracks.

The prevailing teachings are responsible for much of the confusion at Vancouver Barracks. It is commonly thought that tuberculosis is communicable from man to man and from infected surroundings to adults who live in them. Hence the frequent disinfections and the consternation when such measures appear to be unavailing. The writer believes that the communicability of tuberculosis, a fact which can not be denied as a general proposition, is greatly restricted by factors which have until recently not been understood, and desires to state briefly what he considers the latest results of scientific investigations as to the communicability of tuberculosis in a series of propositions. This unusual course is taken for the reason that much of the work which has developed the facts upon which the theory is based is of so recent date that it has not been brought to the attention of the medical profession of this country.

1. Soldiers are probably almost without exception infected with tuberculosis before enlistment; that is, while they have no manifest tuberculous disease, they have come in contact with the tubercle bacillus.
2. Tuberculous infection produces an immunity to reinfection.
3. Localization of tuberculous disease, as in chronic pulmonary tuberculosis, is an evidence of such immunity. The tuberculosis has not spread at once after infection throughout the body because through the acquired immunity its healthy portions have been able to resist temporarily or permanently the establishment of new foci at a distance from the original focus.
4. The processes of immunity are relatively powerless to prevent the spread of tubercles already formed. The disease may gradually extend from the tuberculous foci through the elsewhere immune body until it ultimately overpowers the resistance of the individual and becomes generalized.
5. The manifest tuberculosis of the immune adult (i. e., usually, localized chronic pulmonary tuberculosis) is not acquired from without, but results from the partial breaking down of immunity which permits growth of the subject's own bacilli.
6. If a soldier had never come in contact with tubercle bacilli previous to enlistment a large infection with tubercle bacilli would not cause pulmonary tuberculosis but acute miliary tuberculosis, an acute and rapidly fatal disease.
7. If such an individual should receive a primary dose of tubercle bacilli small enough to produce an immunity in the usual way, the process of development of a chronic pulmonary tuberculosis would be so slow that the place and time of infection would not be determinable.
8. The epidemic prevalence of chronic pulmonary tuberculosis in the Army as the result of infective conditions in barracks or elsewhere is an impossibility.

(*a*) Because 99 out of 100 soldiers are immune to such infection.

(*b*) Because if there were a sufficient number of nonimmune soldiers to make epidemic infection possible the form of tuberculosis would not be chronic pulmonary tuberculosis, but acute disseminated or miliary tuberculosis.

In connection with the opinion of Col. Bushnell quoted above, it is interesting to note that of the 273 cases of tuberculosis occurring in the Army in 1912, 73, or more than one-fourth, were detected during the first year of service.

In 1911 out of 258 cases, 68 were detected the first year of service.

TABLE No. 22.—*Occurrence of tuberculosis (all) among American troops, Army, year 1912, by years of service—Enlisted men.*

	During first year of service.	During second year of service.	During third year of service.	During fourth year of service.	During fifth year of service.	During sixth year of service and over.	Total.
United States, continental (excluding Alaska):							
Mean strength	13,247	9,690	6,698	5,904	5,325	17,510	58,374
Admitted	51	33	9	18	18	61	190
Ratio per 1,000 of mean strenght	3.85	3.41	1.34	3.05	3.38	3.48	3.25
Duty	4	7	1	4	3	8	27
Died	1	1	1	1	2	3	9
Discharged on certificate of disability	27	6	1	2	7	14	57
Otherwise	2	....	2	2	....	1	7
Remaining Dec. 31, 1912	17	19	4	9	6	35	90
Philippines:							
Mean strength	2,610	2,805	1,263	852	880	3,947	12,357
Admitted	15	18	....	2	5	22	62
Ratio per 1,000 of mean strength	5.75	6.42	....	2.35	5.68	5.57	5.02
Duty	....	....	....	....	....	1	1
Died	1	1	....	2	....	2	6
Discharged on certificate of disability	4	3	....	....	....	2	9
Otherwise	....	....	....	....	....	1	1
Remaining Dec. 31, 1912	10	14	....	....	5	16	45
Alaska:							
Mean strength	128	178	83	139	125	544	1,197
Admitted	2	....	....	1	....	2	5
Ratio per 1,000 of mean strength	15.63	....	....	7.19	....	3.68	4.18
Remaining Dec. 31, 1912	2	....	....	1	....	2	5
Hawaii:							
Mean strength	746	1,067	334	183	271	775	3,376
Admitted	3	....	....	1	....	3	7
Ratio per 1,000 of mean strength	4.02	....	....	5.46	....	3.87	2.07
Duty	....	....	....	....	....	1	1
Died	....	....	....	....	....	1	1
Discharged on certificate of disability	1	....	....	....	....	1	2
Remaining Dec. 31, 1912	2	....	....	1	....	....	3
Canal Zone, Panama:							
Mean strength	263	131	62	57	57	203	773
Admitted	1	1	2	....	....	2	6
Ratio per 1,000 of mean strength	3.80	7.63	32.26	....	....	9.85	7.76
Duty	....	....	....	....	....	1	1
Discharged on certificate of disability	....	....	1	....	....	....	1
Remaining Dec. 31, 1912	1	1	1	....	....	1	4
China (no cases):							
Mean strength	190	225	96	90	132	364	1,097
Transports:							
Mean strength	230	270	97	79	131	286	1,093
Admitted	1	....	....	1	1	....	3
Ratio per 1,000 of mean strength	4.35	....	....	12.66	7.63	....	2.74
Discharged on certificate of disability	....	....	....	1	....	....	1
Remaining Dec. 31, 1912	1	....	....	....	1	....	2
Total Army:							
Mean strength	17,414	14,366	8,633	7,304	6,921	23,629	78,267
Admitted	73	52	11	23	24	90	273
Ratio per 1,000 of mean strength	4.19	3.62	1.27	3.15	3.47	3.81	3.49
Duty	4	7	1	4	3	11	30
Died	2	2	1	3	2	6	16
Discharged on certificate of disability	32	9	2	3	7	17	70
Otherwise	2	....	2	2	....	2	8
Remaining Dec. 31, 1912	33	34	5	11	12	54	149

UNDETERMINED FEVERS.

The admission rate for these fevers for the United States was 1.94 per 1,000 as compared with 2.50 for 1911, 2.42 for 1910, 2.15 for 1909, and 3.80 for 1908. The rate was higher in Alaska there being three cases in 1912, and only one in 1911. It was much higher in the Philippine Islands being 15.46 per 1,000 as compared with 6.74 in 1911. The rates for Hawaii, the Canal Zone, and the Transports were lower. The total rate was 4.08 per 1,000 as compared with 3.37

for 1911, and 3.89 for 1910. The different diagnosis included under this heading and the number of admissions are given in the following table:

TABLE NO. 23.—*Undetermined fevers, 1912, American troops, by countries—Enlisted men.*

Diseases.	United States (continental), excluding Alaska.	Alaska.	Hawaii.	Philippine Islands.	Canal Zone, Panama.	China.	Army transports.	Total.
Febricula	39	3	....	104	1	2	1	150
Fever, simple continued	12	....	8	34	....	....	....	54
Fever, type undetermined	55	....	....	53	....	....	....	108
Ephemeral fever	7	....	....	....	....	....	....	7
Total	113	3	8	191	1	2	1	319
Ratio per 1,000 of mean strength	1.94	2.51	2.37	15.46	1.29	1.82	0.91	4.08

MENTAL ALIENATION.

It is impracticable to compare the admission rate for this class of disturbances with the rate for diseases formerly classified and published under the term "insanity." The diseases included under the term "mental alienation," used in the present nomenclature which was put into use January 1, 1912, includes several conditions not included under the term insanity, such as defective mental development, constitutional psychopathic state, hypochondriasis, and nostalgia. The case admission rate for this class of diseases was 3.26 per 1,000 and the discharge rate was 2.78.

ALCOHOLISM.

The admission rate for alcoholism in the United States for the year 1912 was 16.67, which is quite a material improvement over the preceding year, when it was 20.31. It is gratifying to observe that this rate has shown a steady diminution since 1907, following an equally steady rise for eight years before 1907. It is interesting to note that the rate for 1912 is the lowest for any year since 1870, except for the year 1898, when the rate was approximately 16 per 1,000. As this was a year of war, when such rates are usually lower, it can hardly be taken as a basis of comparison. These rates do not represent the amount of intemperance existing in the Army, but as they are all calculated from similar data—that is, the number of cases in which medical assistance was invoked to avert danger—they are useful as an index of alcoholic excess. This marked decrease in the admission rate for 1912 is believed to be largely due to the effect produced by the act of Congress stopping the pay of officers and enlisted men when incapacited for duty on account of sickness due to drug addiction, alcoholism, or other misconduct.

SMALLPOX.

Only 6 cases of smallpox occurred during the year. There was no death. In 1911 there were 4 cases without a death.

DIPHTHERIA.

At Fort Sam Houston an epidemic of this disease, which started in December, 1911, continued until January 19, 1913, when the last case occurred. During the epidemic there were 31 cases, including 6 general prisoners and 3 officers. Eleven of these cases, including 2 among general prisoners, occurred in December, 1911. At Fort Benjamin Harrison in November, 1912, there was a small epidemic of 9 cases, including 1 medical officer and 3 children residing on the reservation. During the year 76 cases occurred. There was no death and no discharge resulting.

MEASLES.

During the year 1912, 426 cases of measles occurred in the United States, with 12 deaths and 6 discharges. In 1911 there were 1,101 cases, with 25 deaths.

Two hundred and one cases, with the 12 deaths and the 6 discharges, occurred in 1912 at Columbus Barracks during the extensive epidemic there, mentioned on pages 79 and 80 of the last report of this office. Since this epidemic was stamped out no other extensive one has occurred, though there have been small epidemics reported at a number of posts.

CEREBROSPINAL MENINGITIS.

Ten cases of this disease with 4 deaths occurred in the Army in the United States during 1912. Between January 1 and June 2, 1913, 13 cases, with 4 deaths and 3 discharges, occurred at Jefferson Barracks, Mo. Maj. Howard, the surgeon, reports as follows:

> Lumbar puncture was done early in every case, and the diagnosis confirmed bacteriologically. Flexners serum was administered in every case as soon as the diagnosis was made and was repeated at intervals as indicated.
>
> With the exception of the last case, all cases were in recruits of very short service, minimum 9 days, maximum 41 days. The source of the infection can not be determined with accuracy, though it is believed that in every case (the last one excepted) the infection was introduced from endemic centers of the disease within recruiting districts tributary to this depot. The cases appeared at widely separated points, 9 separate squad rooms furnishing the 13 cases. No cases appeared among the 400 odd permanent party men (until the last case June 2), though they were exposed to the same conditions in the post as were recruits. Careful investigation was made in every case admitted, and the subsequent history of all contacts was followed so far as possible, and no well-established secondary case could be determined. The evidence points conclusively to the fact that no focus of the disease existed within the post, except as introduced from without by infected individuals or carriers from time to time. During the winter the lower Ohio and Mississippi Valleys were notorious centers of the disease. While this district furnishes but a small part of the total of recruits sent to this depot, there were 10 cases of the disease out of the total of 13 coming from this district.
>
> From experience at this depot it is believed that this disease is transmitted in general directly from infected individuals or meningococcus "carriers," and that the danger of infection from fomites and other indirect agencies is very slight, if not negligible. The meningococcus undoubtedly remains in the naso-pharynx of apparently healthy individuals for weeks or months without a true infection taking place. Some carriers develop the disease while others do not. It appears reasonable to assume that when in a "carrier" the individual resistance is lowered by any one of the various causes that a true infection is invited and often occurs.

INFLUENCE OF STATION.

The posts having the highest noneffective rate this year are Fort Bliss, Tex.; Fort Sam Houston, Tex.; and Fort Huachuca, Ariz., in the order named, the rates being, respectively, 40.94, 39.03, and 32.81 per 1,000. It will be noticed, by referring to the column for the average number of days lost for each case, that Fort Bliss and Fort Sam Houston have the unenviable reputation of standing first and second, respectively, with rates of 19.44 and 15.30. In other words, each case admitted to hospital at Fort Bliss remained on sick report for an average of 19.44 days.

The posts having the highest admission rate for the year are Jackson Barracks, La.; Fort Washington, Md.; and Fort Clark, Tex., in the order named. The rates were 1,293.88, 1,054.11, and 1,052.37 per 1,000. As is stated repeatedly in this report, however, the noneffective rate is the true measure of the effect of sick report upon military efficiency. The noneffective rate at these three posts having the highest admission rate was much lower than the three posts mentioned with the highest noneffective rates, and also lower than several others not mentioned. The average number of days' treatment for each case at Jackson Barracks was 7.53, at Fort Clark 10.11, and at Fort Washington 7.86.

The five posts having the lowest noneffective rates for this year are all Coast Artillery posts. The first three of these posts are Fort Warren, Mass.; Fort Dade, Fla.; and Fort Williams, Me., with noneffective rates, respectively, 5.79, 6.58, and 6.91. The average number of days' treatment for each case at these posts was, respectively, 8.08, 6.10, and 5.42.

The three posts having the lowest admission rates were Fort Warren, Fort Lawton, and Fort Hamilton, with rates, respectively, of 262.01, 335.23, and 350.26. The noneffective rate for Fort Warren is given in the last paragraph; that for Fort Lawton was 11.88, and the average number of days for each case at that post was 12.97.

Of the recruiting depots, Fort Slocum, N. Y., as last year, had the highest noneffective rate, 51.90, and Fort McDowell, Cal., as last year, the lowest, 29.72. Fort McDowell had the highest average number of days' treatment for each case, 12.72, and Columbus Barracks, Ohio, the lowest, 9.68. Columbus Barracks had the highest admission rate, 1,720.50, and Fort McDowell the lowest, 855.24. The highest death rate occurred at Columbus Barracks, 13.39 per 1,000, and the lowest at Fort McDowell, where no death occurred.

The Western Division had the lowest noneffective rate, this being 16.41 per 1,000, as compared with 16.67 for the Eastern and 23.86 for the Central. The Eastern Division had the lowest admission rate, being 660.72 per 1,000, as compared with 676.64 for the Central and 684.48 for the Western. The Eastern Division also had the lowest death rate, this being 3.44 per 1,000, as compared with 3.70 for the Western Division and 4.27 for the Central. The Western Division had the lowest average number of days' treatment for each case, this being 8.77 days, as compared with 9.23 for the Eastern Division and 12.90 for the Central.

Tables Nos. 24 and 25 show the posts having the highest and lowest ratios of admission and noneffectiveness in the United States as a whole.

INFLUENCE OF RACE.

The white troops had higher rates than the colored for noneffective, admissions, and discharges, being 27.23, 745.97, and 14.77, as compared with 25.15, 575.56, and 8.04 per 1,000. The death rate for colored troops was, however, higher, being 7.23, as compared with 4.44. These comparisons were also true for 1910 and 1911.

For venereal diseases the rate for the white troops was 116.24, and for the colored 104.50; for alcoholism the rate for the white troops was 17.11, and for the colored 6.83; for tuberculosis (all kinds) the rate for white was 3.27 and for the colored 2.81; for bronchitis the rate for white was 38.47 and for the colored 32.96; for diarrhea and enteritis the rate for the white was 23.69, and for the colored 22.91; and for rheumatism, articular (all), the rate for colored was 10.45 and for the white 9.75. The relative prevalence of the other several diseases in the two races are shown in Table No. 71 at the end of the report.

TABLE No. 24.—*Posts having the highest admission and noneffective rates per 1,000 of mean strength among all those having a total strength of over 200 officers and men, year 1912.*

		Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective rate.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
	Mean strength.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Posts in order of highest admission rates from all causes:																	
Jackson Barracks, La.	245	1,293.88	1,016.33	4.24	4.24	....	....	4.24	4.24	26.62	25.63	14.55	13.73	9.74	7.53	5.33	5.24
Fort Washington, Md.	499	1,054.11	625.25	....	....	2.00	....	2.00	....	22.65	19.92	13.50	12.01	8.29	7.86	4.94	7.90
Fort Clark, Tex.	401	1,052.37	628.43	....	....	....	....	....	....	29.07	25.16	15.39	12.67	10.64	10.11	5.63	8.96
Fort Oglethorpe, Ga.	845	1,049.70	508.88	....	....	3.55	1.18	3.55	1.18	25.57	19.96	12.36	9.43	9.36	8.92	4.52	8.87
Fort McPherson, Ga.	761	938.24	436.27	2.74	1.37	5.26	....	8.00	1.37	27.91	25.48	10.79	9.83	10.21	10.89	3.95	9.05
Posts in order of highest admission rates, excluding venereal diseases, injuries, etc.:																	
Jackson Barracks, La.	245	1,293.88	1,016.33	4.24	4.24	....	....	4.24	4.24	26.62	25.63	14.55	13.73	9.74	7.53	5.33	5.24
Fort Clark, Tex.	401	1,052.37	628.43	....	....	....	....	....	....	29.07	25.16	15.39	12.67	10.64	10.11	5.63	8.96
Fort Washington, Md.	499	1,054.11	625.25	....	....	2.00	....	2.00	....	22.65	19.92	13.50	12.01	8.29	7.86	4.94	7.90
Fort Douglas, Utah.	876	898.40	619.86	....	....	6.85	3.42	6.85	3.42	25.33	20.82	18.10	15.67	9.27	10.32	6.63	10.69
Fort Benjamin Harrison, Ind.	744	923.39	579.30	1.43	1.43	2.69	....	4.12	1.43	30.48	27.69	18.59	17.04	11.16	12.08	6.80	11.74
Posts in order of highest noneffective rates from all causes:																	
Fort Bliss, Tex.	567	770.72	488.54	1.83	....	14.11	8.82	15.94	8.82	40.94	38.75	22.66	21.72	14.98	19.44	8.29	16.97
Fort Sam Houston, Tex.	1,083	933.52	501.39	3.86	.97	4.62	3.69	8.48	4.66	39.03	31.91	17.65	14.24	14.28	15.30	6.46	12.88
Fort Huachuca, Ariz.	349	796.56	504.30	....	....	8.60	2.87	8.60	2.87	32.81	28.53	15.70	13.61	12.01	15.08	5.75	11.40
Fort D. A. Russell, Wyo.	2,314	828.44	535.00	3.65	3.65	5.19	2.59	8.84	6.24	31.40	30.70	17.79	17.35	11.49	13.87	6.51	12.17
Fort Benjamin Harrison, Ind.	744	923.39	579.30	1.43	1.43	2.69	....	4.12	1.43	30.48	27.69	18.59	17.04	11.16	12.08	6.80	11.74

Posts in order of highest noneffective rates, excluding venereal diseases, injuries, etc.:																	
Fort Bliss, Tex.	567	770.72	488.54	1.83	....	14.11	8.82	15.94	8.82	40.94	38.75	22.66	21.72	14.98	19.44	8.29	16.97
Vancouver Barracks, Wash.	1,370	820.44	549.64	2.29	2.29	2.19	....	4.48	2.29	27.78	23.30	19.38	17.18	10.17	12.39	7.09	12.90
Fort Benjamin Harrison, Ind.	744	923.39	579.30	1.43	1.43	2.69	....	4.12	1.43	30.48	27.69	18.59	17.04	11.16	12.08	6.80	11.74
Fort Douglas, Utah	876	898.40	619.86	....	....	6.85	3.42	6.85	3.42	25.33	20.82	18.10	15.67	9.27	10.32	6.63	10.69
Fort D. A. Russell, Wyo.	2,314	828.44	535.00	3.65	3.65	5.19	2.59	8.84	6.24	31.40	30.70	17.79	17.35	11.49	13.87	6.51	12.17

TABLE No. 25.—*Posts having the lowest admission and noneffective rates per 1,000 of mean strength, among all those having a total strength of over 200 officers and men, year 1912.*

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective rate.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Posts in order of lowest admission rates from all causes:																	
Fort Warren, Mass	229	262.01	148.47							5.79	5.58	3.54	3.35	2.12	8.08	1.30	8.74
Fort Lawton, Wash	352	335.23	178.98			5.68		5.68		11.88	11.06	4.66	4.03	4.35	12.97	1.70	9.52
Fort Hamilton, N. Y	571	350.26	197.90							6.95	6.69	3.73	3.53	2.54	7.26	1.36	6.89
Fort Dade, Fla	223	394.62	228.70							6.58	6.14	3.84	3.81	2.41	6.10	1.40	6.14
Fort Crook, Nebr	521	437.62	318.62	4.02	4.02	1.92		5.94	4.02	16.80	15.59	9.70	9.13	6.15	14.05	3.55	11.14
Posts in order of lowest admission rates, excluding injuries, etc.:																	
Fort Warren, Mass	229	262.01	148.47							5.79	5.58	3.54	3.35	2.12	8.08	1.30	8.74
Fort Lawton, Wash	352	335.23	178.98			5.68		5.68		11.88	11.06	4.66	4.03	4.35	12.97	1.70	9.52
Fort Hamilton, N. Y	571	350.26	197.90							6.95	6.69	3.73	3.53	2.54	7.26	1.36	6.89
Fort Dade, Fla	223	394.62	228.70							6.58	6.14	3.84	3.81	2.41	6.10	1.40	6.14
Fort McIntosh, Tex	255	494.12	235.29	4.15	4.15			4.15	4.15	15.31	14.58	6.24	5.89	5.60	11.34	2.28	9.70
Posts in order of lowest noneffective rates, from all causes:																	
Fort Warren, Mass	229	262.01	148.47							5.79	5.58	3.54	3.35	2.12	8.08	1.30	8.74
Fort Dade, Fla	223	394.62	228.70							6.58	6.14	3.84	3.81	2.41	6.10	1.40	6.14
Fort Williams, Me	598	466.56	269.23							6.91	6.60	3.66	3.44	2.53	5.42	1.34	4.97
Fort Hamilton, N. Y	571	350.26	197.90							6.95	6.69	3.73	3.53	2.54	7.26	1.36	6.89
Fort Crockett, Tex	234	559.83	346.15			4.27		4.27		10.45	10.33	5.76	5.70	3.82	6.83	2.11	6.09

Posts in order of lowest noneffective rates, excluding injuries, etc.:																	
Fort Warren, Mass	229	362.01	148.47	....	....	....	....	....	....	5.79	5.58	3.54	3.35	2.12	8.08	1.30	8.74
Fort Williams, Me	598	466.56	269.23	....	....	....	....	....	....	6.91	6.60	3.66	3.44	2.53	5.42	1.34	4.97
Fort Hamilton, N. Y	571	350.26	197.90	....	....	....	....	....	....	6.95	6.69	3.73	3.53	2.54	7.26	1.36	6.89
Fort Dade, Fla	223	394.62	228.70	....	....	....	....	....	....	6.58	6.14	3.84	3.81	2.41	6.10	1.40	6.14
Fort Lawton, Wash	352	335.23	178.98	....	....	5.68	....	5.68	....	11.88	11.06	4.66	4.03	4.35	12.97	1.70	9.52
RECRUIT DEPOTS.																	
Columbus Barracks, Ohio	1,193	1,720.50	1,197.49	59.78	48.67	13.39	13.39	73.17	62.06	45.50	40.95	35.21	31.72	16.65	9.68	12.89	10.76
Fort Slocum, N. Y	1,297	1,616.81	1,146.49	102.12	87.20	4.63	1.54	106.75	88.74	51.90	47.97	37.19	34.68	18.99	11.75	13.61	11.86
Fort Logan, Colo	646	1,490.71	965.94	113.24	82.93	3.10	1.55	116.34	84.48	42.27	33.40	30.56	26.54	15.47	10.38	11.19	11.58
Jefferson Barracks, Mo	1,294	1,136.44	816.99	70.77	54.12	6.54	4.08	77.28	58.20	36.92	36.32	22.91	22.58	13.51	11.89	8.38	10.26
Fort McDowell, Cal	677	855.24	571.64	98.93	83.71	....	....	98.93	83.71	29.72	25.90	21.95	19.49	10.88	12.72	8.03	14.42

INFLUENCE OF AGE AND LENGTH OF SERVICE.

The youngest soldiers and those serving their first enlistment had, as usual, the highest admission and discharge and noneffective rates, and the death rate was highest among those 45 years of age or over, having 10 years or more of service. The lowest admission and the lowest constantly noneffective rate occurred in soldiers between 35 and 40 years of age.

The following table exhibits the effects of age and length of service upon rates of disease:

TABLE No. 26.—*Influence of disease on enlisted men serving in the United States continental (excluding Alaska), by length of service, age, and arms of service, for the year 1912.*

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Length of service:									
Under 1 year	13,247	14,037	397	35	505.69	1,059.63	29.97	2.64	38.18
1 to 2 years	9,690	5,816	104	7	226.39	600.21	10.73	.72	23.36
2 to 3 years	6,698	2,935	39	7	101.09	438.19	5.82	1.05	15.09
3 to 4 years	5,904	2,679	63	3	103.29	453.76	10.67	.51	17.50
4 to 5 years	5,325	2,583	48	9	97.54	485.07	9.01	1.69	18.32
5 to 10 years	8,472	3,626	73	23	141.73	428.00	8.62	2.71	16.73
10 years and over	9,038	3,170	64	52	141.59	350.74	7.08	5.75	15.67
Total	58,374	34,846	788	136	1,317.34	596.94	13.19	2.28	22.57
Age:									
19 years and under	2,637	2,827	63	13	88.61	1,072.05	23.89	4.93	33.60
20 to 24 years	23,126	17,575	351	34	635.33	759.97	15.18	1.47	27.47
25 to 29 years	15,854	8,327	193	18	321.66	525.23	12.17	1.14	20.29
30 to 34 years	8,376	3,237	109	21	140.22	386.46	13.01	2.51	16.74
35 to 39 years	4,531	1,521	38	11	65.91	335.69	8.39	2.43	14.55
40 to 44 years	2,324	791	19	21	39.05	340.36	8.18	9.04	16.80
45 to 49 years	1,093	385	11	10	16.28	352.24	10.06	9.15	14.89
50 years and over	433	183	4	8	10.25	422.63	9.24	18.48	23.67
Total	58,374	34,846	788	136	1,317.34	596.94	13.19	2.28	22.57
Arms of service:									
Infantry	16,572	9,706	202	39	404.49	585.70	12.19	2.35	24.41
Cavalry	9,418	4,800	77	16	186.76	509.66	8.18	1.70	19.83
Field Artillery	3,829	2,504	48	5	108.34	654.00	12.53	1.31	28.29
Coast Artillery	16,025	8,338	200	26	298.17	520.31	12.48	1.62	18.60
Ordnance	636	412	5	2	10.64	647.80	7.86	3.14	16.73
Engineers	1,207	630	15	3	32.85	521.95	12.43	2.49	27.22
Signal Corps	764	388	4	1	14.99	507.85	5.24	1.31	19.62
Hospital Corps	2,502	1,297	54	9	58.08	518.38	21.58	3.60	23.21
All others	7,421	6,771	183	35	203.03	912.41	24.66	4.72	27.36
Total	58,374	34,846	788	136	1,317.34	596.94	13.19	2.28	22.57

INFLUENCE OF SEASON.

Excluding venereal diseases, alcoholism, and injuries, the highest admission, noneffective, and death rates were in March. The lowest admission and noneffective rates occurred in November, and the lowest death rate in October. The following table (No. 27) shows the movement of sick by months. A study of these data for previous years shows a wide variation in the months showing the several highest and lowest rates. It can be stated, however, in general terms that all rates are highest in the first half of the year and the lowest in the second half. March and April give the highest constantly noneffective rates, and October and November the lowest:

TABLE No. 27.—*Influence of season, United States, continental (excluding Alaska) year 1912—Enlisted men.*

Month.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, injuries, alcoholism, and vaccinia.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.		Total.	Hospital.				
January....	54,703	72.39	65.48	0.24	30.22	28.26	44.44	0.13	16.39	Tonsillitis, 457; acute bronchitis, 198; influenza, 100; constipation, 93.
February..	55,512	70.58	63.72	.39	30.50	28.42	45.29	.21	18.02	Tonsillitis, 527; acute bronchitis,202; mumps, 111; influenza, 106.
March......	56,176	76.60	68.21	.54	32.09	29.62	52.48	.29	20.76	Tonsillitis, 472; mumps, 267; acute bronchitis, 253; influenza, 107.
April.......	57,667	67.60	60.64	.35	30.14	27.84	44.08	.15	19.34	Tonsillitis, 323; mumps, 309; acute bronchitis, 186; measles, 86.
May........	58,317	62.88	56.26	.40	28.93	26.75	38.84	.12	17.22	Tonsillitis, 199; acute bronchitis, 185; mumps, 171; diarrhea and enteritis, 126.
June.......	57,018	57.93	49.62	.48	26.92	24.69	32.50	.18	15.16	Tonsollitis, 125; acute bronchitis, 124; diarrhea and enteritis, 109; constipation, 101.
July........	60,014	56.57	45.27	.28	25.31	22.97	33.08	.16	14.82	Diarrhea and enteritis, 164; tonsillitis, 137; acute bronchitis, 129; malarial fever, 114.
August.....	59,826	56.67	44.60	.50	25.39	23.01	33.78	.19	15.08	Diarrhea and enteritis, 228; malarial fever, 128; tonsillitis, 113; acute bronchitis, 104.
September.	60,524	53.14	44.28	.39	25.25	23.14	30.04	.16	14.86	Diarrhea and enteritis, 152; tonsillitis, 131; malarial fever, 128; acute bronchitis, 121.
October....	60,077	54.95	44.74	.29	24.73	22.56	30.71	.11	14.50	Tonsillitis, 196; acute bronchitis, 134; diarrhea and enteritis, 134; malarial fever, 96.
November.	60,325	53.10	45.64	.28	23.79	22.03	29.66	.15	13.84	Tonsillitis, 218; acute bronchitis, 179; constipation, 78; diarrhea and enteritis, 76.
December..	60,333	59.12	50.20	.42	23.55	21.82	39.05	.22	14.89	Acute bronchitis, 313; influenza, 312; tonsillitis, 249; rhinitis, 93.
Total.	58,374	738.70	370.93	4.55	27.15	25.00	451.69	2.08	16.19	Tonsillitis, 3,147; acute bronchitis, 2,128; diarrhea and enteritis 1,381; constipation, 1,009.

SANITATION, UNITED STATES.

The sanitary conditions throughout the Army for the year were exceptionally good. Very few sanitary defects of any importance were reported on the monthly sanitary reports, and when the attention of the authorities was called to such defects, as existed by these reports, they were usually corrected with promptness, except in cases where large appropriations of money were required.

BARRACKS AND QUARTERS.

Barracks are reported as overcrowded at Forts Constitution, Terry, Warren, and Vancouver Barracks. The cantonment barracks at the Presidio of San Francisco are also reported as overcrowded. The ventilation in these cantonments and in the barracks at Fort Greble is inadequate. Efforts have been made to have these defects remedied. The surgeon at Fort Apache states that the buildings there are old and in need of repair.

The department hospital at Honolulu is too small. Plans have been drawn, however, and steps taken to enlarge this hospital sufficiently to meet all the needs of the department for a general hospital.

The guardhouse at Monterey has been frequently reported by the surgeon as entirely too small for the size of the garrison, and the commanding officer has made every effort to have it enlarged, but so far without success. The bakery at Fort Yellowstone was reported in 1911 as badly located, too small, and in poor condition. This condition still exists.

SEWAGE DISPOSAL AND DISPOSAL OF WASTE.

A garbage incinerator has been installed at Fort Des Moines, and is reported to be working satisfactorily. In December the surgeon at Jackson Barracks reported that the sewage-disposal system at that post had been changed and that the post system was connected with the general system for the city of New Orleans. Heretofore the sewage has been emptied into a cesspool, from which the coarser material was removed from time to time by contract. In the last annual report mention was made of a report of a board of officers, composed of Lieut. Col. J. R. Kean, Medical Corps, Maj. F. F. Russell, Medical Corps, and Capt. E. T. Hartmann, Quartermaster's Corps, on the sewage disposal, at Fort McPherson, Ga.; the disposal plant recommended was completed and ready for use about the last of the year. Since that time it has been working satisfactorily. The sewage-disposal plant at Fort Sheridan has also been completed and is satisfactory.

WATER SUPPLY.

The water supply at Fort Omaha, which has heretofore been reported as unsafe, is now reported as satisfactory. A mechanical filter has been completed, and the water is now clear and potable.

Considerable difficulty has been experienced with the water supply at Fort D. A. Russell. The city of Cheyenne is under contract to furnish this post with a satisfactory, potable water. The supply is impounded in reservoirs from an extensive watershed. This watershed is not fully protected, and has in the past been used as pasture land, and has had several ranch houses located on it. As there is no system of purification, the water is at times quite turbid, and on some occasions has been offensive, due to growth of algæ in the reservoirs. Steps are now being taken by the city of Cheyenne to establish a proper filtration system; in the meantime, at the post, artesian water is being supplied for drinking purposes. The water supply at Fort Lincoln is supplied by the city of Bismarck, N. Dak. The water is from the Missouri River; it is passed through a sedimenting well and three reservoirs before distribution. A part of the year the water is clear and palatable, but at other seasons it becomes turbid, with a high bacterial count and with gas-forming organisms, when it is necessary to boil it. At Fort Porter the water is unsafe, and is boiled. At Fort Niagara distilled water is distributed for drinking and cooking, as the general supply is unsafe. The supply for Fort Des Moines, which was formerly considered unsafe, is now rendered potable by the use of the hyperchlorite process.

At several of the Coast Artillery posts, on account of the high chlorine content, the water is damaging to the pipes and to fabrics. This is especially true at Forts Stevens, H. G. Wright, Terry, DuPont, and Morgan.

SMOKE NUISANCE.

Especial efforts have been made by the post authorities at Columbus Barracks during the year to abate the smoke nuisance. A mechanical stoker has been used in the laundry with good success. As this stoker requires a certain steam pressure, it can not be used in the barrack building with the boilers in use at present. The city of Columbus has passed an antismoke ordinance, and the post authorities are quite anxious to cooperate. The subject is still under consideration by the War Department and by the post authorities as to the best methods to be adopted. At Fort Wayne suit was instituted by the Government, at the request of the commanding officer, against the Detroit Edison Illuminating Co., to compel the company to prevent the smoke coming from their furnaces, which is a great detriment to the post. The suit is suspended to allow the company to carry out the remodeling of the plant. They have changed some of their furnaces, put in a better type of mechanical stoker, and lengthened the smokestacks. When these measures are completed and the desired results obtained, the suit will be dismissed. At Fort Sheridan the offending smoke comes from post building. So far as is known, nothing has been done to better the condition there.

SERVICE CAP AND CAMPAIGN HAT.

The obligatory use of the service cap for constant use in posts is still commented upon adversely by surgeons and commanding officers. This office has several times recommended that the commanding officer be authorized to prescribe the campaign hat whenever the climatic conditions, in his opinion, render such necessary.

SHOES.

Mention was made in the last annual report of the work of the board at Fort Leavenworth, of which Maj. E. L. Munson, Medical Corps, was president, for the selection of a proper shoe for the Army. It was stated in that report that as the result of the work of this board, it was believed that a suitable shoe had been obtained. During the past year it has been necessary to issue such shoes as were on hand. The supply is now almost exhausted, and the new shoes are just now beginning to be issued. Attention is again called to the fact that the shoe can not be fairly considered by itself alone, since its actual utility depends upon the construction, supply, and fit. The fitting must be supervised by officers, who must instruct themselves accordingly. During the present year an officer who had been recommended for action by a retiring board, was ordered to one of the general hospitals, on account of a painful foot. Although there had been considerable correspondence about this officer's case, and he had been advised as to the kind of shoes which would probably be suitable for him, yet when he reported at the general hospital it was found that he was wearing shoes which did not fit him and which were entirely unsuitable for any human foot. A most excellent book, embodying the experience of the board at Leavenworth, has been written by Maj. Munson and published. This book should be carefully studied by all officers and noncommissioned officers who are concerned in the fitting of shoes.

SANITARY SURVEY OF SOLDIERS.

In accordance with the recommendation of the surgeon at Fort Totten, a sanitary survey of all enlisted men in that post is made quarterly. The men are divided in various classes, according to their physical fitness. Any man requiring surgical treatment is sent to the hospital. The same is true in regard to dental treatment, if there is a dentist available. The men who are in special need of physical development are given a course in gymnasium and calisthenic work under the supervision of the post surgeon. The general physical improvement in practically all the men as the result of this training is reported to have been quite marked. Another class receive special rigid company care looking toward the correction of faulty habits—eating, drinking, smoking, care of teeth, etc.

MANEUVER CAMPS, 1912.

During the year 1912 there were only three camps established for the joint instruction of the mobile army and the militia. These were at Fort Benjamin Harrison, Ind.; Anniston, Ala.; and the Connecticut maneuver campaign. The Connecticut maneuver campaign was participated in by regular troops of the mobile army and by militia from New York, New Jersey, Massachusetts, Connecticut, Maine, and Vermont. The troops were divided into the Blue Division and the Red Division. Col. L. M. Maus, Medical Corps, was chief surgeon, and Lieut. Col. William Stephenson, Medical Corps, sanitary inspector of the combined forces. Maj. Robert U. Patterson, Medical Corps, was the assistant to the chief surgeon. The medical staff for the Blue Division was Maj. W. H. Wilson, Medical Corps, chief surgeon, and Maj. Albert E. Truby, sanitary inspector; that for the Red Division was Maj. Thomas J. Kirkpatrick, chief surgeon, and Maj. Basil Dutcher, sanitary inspector. There were a number of other medical officers on duty as medical inspectors of the militia and with the regular troops engaged.

The chief surgeon states that letters were sent to the adjutant generals of the States sending troops with a request that a physical examination be made of their respective troops before departure for the maneuvers in order that all those physically disabled might be left at home. He states:

> This request was complied with only in part, inasmuch as a number of men reported with their commands who were entirely unsuited for field service. In order to protect both the Government and the State, boards of medical officers were ordered to convene on the arrival of each organization, for the purpose of culling out the inefficients so that they could be returned at once to their home stations. The personnel of these boards consisted of the Army medical officers assigned as instructor umpire and the senior militia medical officer of each organization. In spite of this precaution, a number of such men remained with their organizations, through the courtesy of indulgent commanding officers, and were found riding about in the various ambulances during the engagements as spectators. Among the disabled were a number of men suffering from gonorrhea. Had the home examinations been made as requested, the Government would have been spared the unnecessary expense of their transportation, pay, and subsistence, and the medical department the burden of their care.

The camp was from August 10 to August 19, 1912. There was a course of instruction for the medical officers of the regular corps and militia, August 10 to August 15.

The camp at Fort Benjamin Harrison was from July 15 to August 1, 1912. There were two periods of instruction for the militia. The first period, July 15 to July 24, was occupied by the Indiana Militia and the second period, July 24 to August 1, by the Ohio. Maj. D. F. Duval, Medical Corps, was the chief surgeon, and Maj. John A. Murtagh, Medical Corps, was the sanitary inspector. In reference to the instruction of the militia medical officers, Maj. Duval says:

> For the Indiana medical officers the instruction consisted of conferences on camp sanitation, which included demonstrations on the construction of company kitchen incinerators and latrines and the medico-military problems. The subject of camp

sanitation, however, did not elicit the interest shown in medico-military problems. This was due to the fact that in all camps heretofore camp sanitation had been dwelt upon so strongly that the medical officers thought they at least had a fair knowledge of sanitary matters, whereas medico-military problems were a new feature, and they felt they knew little about them. This being the case, the program for the medical officers, Ohio National Guard, was confined exclusively to tactical rides and problems, of which they had five. This instruction I believe was a success. The noncommissioned officers were given instruction in medical department papers and fieldwork, and the Hospital Corps was instructed in drilling.

Maj. Paul C. Hutton, Medical Corps, was the chief surgeon at the camp at Anniston, Ala., and Maj. Eugene R. Whitmore, Medical Corps, the sanitary inspector. This camp was from July 5 to August 4, 1912. There was a regular course of instruction for the militia medial officers and Hospital Corps men. The health of the troops at all these camps was excellent.

SANITATION, SECOND DIVISION.

CAMPS AT TEXAS CITY AND GALVESTON.

These camps have been occupied since February 27, 1913. The health of the troops has been at all times excellent. It is interesting to note that not a single case of typhoid fever has developed in either of these camps, or in fact in any of the camps along the Mexican border in 1913. Lieut. Col. W. B. Bannister, Medical Corps, has been chief surgeon, with Maj. R. B. Miller as sanitary inspector at the camp at Texas City, and Maj. F. M. Hartsock, sanitary inspector at the Galveston camp.

The following extracts are from the report of the chief surgeon, July 1, 1913:

TEXAS CITY CAMP.

The original camp site for the Fourth and Sixth Brigades were selected by line officers prior to the arrival of troops, and when headquarters arrived February 27 pipe lines were in place, but the camp site was swampy and with considerable standing water, so that the tents could not be arranged in regular order, and the ground was so level and low and at such distance from the bay front as to present great difficulties in drainage. The troops were pouring in, and it was necessary to locate them temporarily on the site selected till further observation of the terrain permitted the selection of a more sanitary site. By March 3 the division was complete. It was this original camp site that brought about the complaints and criticism with regard to the Texas City encampment, but the commanding general of the Second Division had no voice in the original selection.

A new camp site on the bay front was selected and prepared in advance of occupation by ditching, under supervision of the engineers. Gravel walks were made and tent sites tamped and graveled. On March 13 and 14 the Sixth Brigade occupied the new camp site and the Fourth Brigade on March 22. The new site could be easily drained into the bay, and has proved an excellent selection, as it becomes dry very soon after the heaviest rains we have so far encountered. The soil of the original camp site was composed of clay almost impervious to water for about three feet and then a layer of sand, and this conformation caused difficulties that will be discussed under a different heading.

Water is piped to the camp and is furnished by two artesian wells.

All men requiring it were vaccinated against smallpox. The typhoid prophylactic was administered to all residents of the camp 45 years of age or under, either soldiers requiring it or civilian employees and servants. The sale of articles of food in camp, except such as could be purchased from commissary and authorized exchanges, was prohibited.

The sanitary condition of the grounds was placed under the jurisdiction of each regiment which maintained regimental sanitary squads, under orders of the regimental surgeon.

Sanitary conditions of the grounds not under regimental jurisdiction was maintained by a sanitary squad, composed of four civilians hired by the quartermaster's department, and under orders of the sanitary inspector of the division, who was also charged with the supervision of the sanitary condition of the entire camp. The attention of the regimental surgeon was called to any sanitary defects discovered at these inspections; and if they were not promptly corrected the sanitary inspector left notes with the regimental adjutant concerned. If this failed to promptly effect the purpose, report was made to division headquarters. The latter reference was necessary in but rare instances, thus avoiding a considerable volume of correspondence. All officers and enlisted men were required to sleep under mosquito nets, and the few cases of malarial fever imported to camp were treated in a specially screened ward in the field hospital.

Flies are destroyed by fly traps, swatting squads, and the use of condensed milk and formalin, as follows: To each cup of 1 part of water and 3 parts of condensed milk is added 1 to 2 teaspoonfuls of formalin. This is placed in saucers and is very effective. The fly traps are of various sizes, either round or rectangular, and consist, essentially, of a light wooden frame supporting wire netting, inclosing a space, except at the bottom of the trap, in which is a round hole about 3 inches in diameter. Around the margin of the hole is attached a truncated cone of wire netting, the top of the cone extending up into the inclosed space. These traps are provided with supports to hold them about 2 inches above the support on which they rest, and under the central hole at the bottom is placed a saucer containing the bait. The bait consists of sweetened water, meat, or, the most effective of all, chicken entrails. The traps are set outside the screened kitchens, and it is surprising to see the number of flies that are caught. Each company uses from four to eight traps.

The method employed for the disposal of excreta consisted of pits from 5 to 7 feet deep, according to the depth at which the ground water was reached. These pits were covered by boxes provided with 10 holes, with tops automatically closing to make them fly proof. The boxes were tipped back each day and the pits burnt out, with 14 pounds of straw and 1 gallon of crude petroleum per pit, each day. The urinals covered 2 of the 10 holes, and the projection in the bottom slipped through a hole bored in the top of the latrine box, allowing 8 holes for use; but this was found amply sufficient for each company. This method of using the urinals was made necessary by the fact that the fences inclosing each latrine were built before the urinals were received, and there was not sufficient room between the fences and the latrine boxes to use the urinals the way they were constructed to be used. The method has proven very satisfactory. By coating these urinals with crude petroleum no fly will light in them. It was found that in tipping back the latrine box to burn out the pits the weight of the box caved in the edge of the pit, so that the contents of the pit was accessible to flies. This was avoided by a footboard extending entirely around the latrine box, with a strip of wood marking out on the foot a space sufficient to just receive the latrine box. This footboard also prevents men sitting on the latrine box from caving in the front edge of the pit.

The picket lines are cleaned each day and the manure hauled to a common dumping ground, where it is distributed in windrows and burnt over. These windrows are 8 or 10 feet apart, so as to allow space, when the manure is wet by rain, to spread the heaps out to dry. The picket lines are burnt over with hay and crude petroleum once each week.

The waste of each company and separate unit is disposed of in kitchen incinerators, and that portion of the waste that is indestructible by fire, such as tin cans, etc., after sterilization in fire, are buried.

As this encampment is immediately contiguous to Texas City and the enlisted men frequent cafés, restaurants, saloons, etc., and officers' families reside in the hotels, the sanitary conditions of these establishments and of the town was of serious importance to this command. After consultation with the health officer and mayor and with their concurrence, a sanitary inspector was detailed on this inspection duty in Texas City. The object of this inspection was to see that the garbage from restaurants was properly disposed of, etc., that food exposed for sale was protected from flies, that ice boxes were provided for meats, etc., and that open privies were made fly proof, and that premises were kept clean. In the case of cafés, restaurants, and saloons, if the recommendations were not carried out, the provost guard of the city was notified and a sentry was stationed in front of the offending establishment and no soldiers permitted to enter until the sanitary inspector requested the removal of the sentry. In case of a dispute between the proprietor and the sanitary inspector the division surgeon personally inspected the premises and decided whether the sentry should be removed or not. This was necessary in only two instances. As the places referred to are entirely dependent on soldier patronage, the method was very effective. In case of hotels, the kitchens, ice boxes, and premises were inspected with the consent of the proprietor and defects reported to him by the sanitary inspector. The control of the sanitation of a town by the military and the concurrence of its inhabitants, even where saloons, restaurants, etc., were temporarily closed, with scarcely any friction was a matter of considerable surprise to the division surgeon who inaugurated the method somewhat as an experiment. This, I believe, will be successful only where the business interest concerned is dependent on soldier patronage, and where the inhabitants understand that in case of an undue amount of sickness the command would be moved elsewhere.

GALVESTON CAMP.

The Fourth, Seventh, and Nineteenth Infantry were camped on the parade grounds of Fort Crockett. The Twenty-eighth Infantry was encamped on low-lying sandy soil on the sea front.

The water supply comes from artesian wells on the mainland, 17 miles inland at Alta Loma, and is piped to camp. The quality of the water is excellent.

In the camp of the Fifth Brigade, three regiments, the Fourth, Seventh, and Nineteenth Infantry, had toilets provided with four galvanized tin troughs opening into a common center, flushing into sewer mains by means of water taps at each end. Board seats were provided, covered, and sheltered by wood fenc [illegible] troughs made of [illegible] were provided in every toilet and flushed with runni [illegible] ter system was kept so that a continuous small stream was provided at all times, large 2-inch faucets were utilized in addition to flushing thoroughly twice daily the entire system. This latter flushing was handled by a sanitary squad from each regiment under the direction of a sanitary sergeant and the supervision of the sanitary inspector, Fifth Brigade. Disposal of excreta in the Twenty-eighth Infantry camp was by means of earth latrines covered by latrine boxes, with the usual daily incineration, for the first six weeks. Owing to the frequent caving in of the latrines, eight old pattern McCall incinerators were installed for this regiment and the latrine system discontinued. In other respects the sanitary means employed in this camp were the same as employed in the camp at Texas City.

SANITARY INSPECTION OF THE CAMPS AT TEXAS CITY AND GALVESTON, TEX., BY LIEUT. COL. J. R. KEAN.

Soon after the camp was established at Texas City repeated reports were received in the War Department from interested civilians to the effect that the health of the troops could not be maintained at that camp site. The Secretary of War directed Lieut. Col. J. R. Kean, Medical Corps, to proceed there and make a special sanitary inspection. He arrived on March 17, and spent several days in inspecting the camps. He reported that—

> To sum up the advantages of the two points, Galveston has in its favor: (1) It will be cooler; (2) more free from mosquitoes; (3) much greater facilities for the amusement of officers and men; (4) a sewered camp site for most of the troops; (5) less mud in prolonged wet weather.
>
> On the other hand, Texas City has in its favor: (1) The fact that the troops are now established there and have expended much labor to make their camp site comfortable and sanitary; (2) its sanitary arrangements are all completed and are satisfactory from a hygienic point of view.
>
> It is the opinion of the undersigned that the health of the troops at Texas City can be maintained at a satisfactory standard without moving the camp. A transfer to Galveston will, however, much promote the comfort, amusement, and contentment of the command.

He found that at the camp at Galveston—

> There seems to have been much delay in providing latrines for the Twenty-eighth Infantry, and for the first three weeks they used shallow trenches without box seats, a primitive method which would have made trouble had the weather been warmer, as the eggs of flies deposited in fecal matter hatch out and develop in spite of burying, and the fully developed fly still retains in its intestines infectious material on which the larvæ may have fed.
>
> The finishing touches were being put on the Havard sink boxes by the company artificers the day of my inspection, the 17th, and urine troughs were not yet installed.

He recommended that—

> Latrines and kitchen incinerators are necessary as soon as troops arrive at a camp, in order to avoid improvised methods of disposal which pollute the camp site, and therefore steps should be taken to provide them in advance of the arrival of troops.
>
> For the methodical and sanitary preparation of camp sites, it is recommended that in every case where a command larger than a regiment is placed in camp that an engineer officer, a medical officer, and a quartermaster be ordered in advance to prepare the camp site. The medical officer should if possible be either the sanitary inspector of the department or of the division to which the troops belong.

VETERANS' CAMP AT GETTYSBURG, PA., 1913.

Lieut. Col. Alfred E. Bradley, Medical Corps, chief surgeon of this camp, reported in part as follows:

> The veterans' encampment at Gettysburg, Pa., July 1 to 4, 1913, was first designed to accommodate 40,000 veterans.
>
> I was designated chief surgeon of the camp on June 6, 1913, and proceeded on June 7 to Gettysburg to inspect the camp to determine just what sanitary measures were indicated, and what arrangements should be made to care for the sick. It was thought that the advanced age of the men the camp was to shelter, the season of the year, and the long journey many would take to reach the camp would result in unusual morbidity, and probably a large mortality.

It was my belief that the hospital provisions which had already been made, namely, one field hospital and three regimental hospitals, would not be adequate, and recommendations were made that another field hospital and more sanitary personnel be provided, and supplies and equipment be furnished so that these hospitals could be expanded to accommodate at least 1,000 sick. I was informed at this time by Maj. Normoyle, Quartermaster Corps, in charge, that 55,000 veterans were expected, and that the civilian employees of the camp would total more than 2 000. My estimate was therefore based on less than 2 per cent sick, which seemed to me to express the minimum requirements. My recommendations were approved and Field Hospital No. 1 was ordered from Fort D. A. Russell, Wyo., additional personnel was ordered (G. O. 26, H. E. D., June 14, 1913), supplies were provided, and to meet the emergency a sufficient number of regular medical officers not being available, 23 Medical Reserve Corps officers were ordered into active service for duty from June 28 to July 10, 1913.

During the encampment 741 ambulance calls were responded to and 1,100 patients were transported.

The personnel, commissioned and enlisted, provided was found to be not at all in excess of that needed. For a period of 48 hours the demands were such that the day was 24 hours long for all. But little time was available for rest or sleep. A less number of officers and men would have been unable to meet the demands made upon the Medical Department during the busiest days.

In assigning and distributing the personnel efforts were made to make provision for prompt first aid. To this end 11 aid stations were established in the camp proper, which, with the 5 hospitals, provided 16 places where first aid could be promptly secured.

Under command of Maj. R. U. Patterson, Medical Corps, the American Red Cross Society, acting as an auxiliary to the Medical Department, operated 14 first-aid and rest stations on the battlefield park roads, over which great crowds passed during the days of the encampment. Red Cross nurses were also assigned to duty with the field hospitals, 13 to each hospital, and did excellent work. Nine persons died, 8 being Federal veterans and 1 a Confederate veteran.

The department of health, State of Pennsylvania, made ample provisions in Gettysburg for the care of the great crowds which poured into that small town. An emergency field hospital was established which cared for many hundreds of patients. First-aid and comfort stations were established in various parts of the town and at the great assembly tent outside the camp proper.

The water was obtained from artesian wells put down for the purpose on the camp site. It was pumped into storage tanks and distributed by gravity. It was of excellent quality and ample in quantity for all purposes. Bubbling drinking fountains supplied by a coil of pipe passing through packed ice made ice water available for drinking purposes throughout the camp, which was a source of much comfort to all during the intensely hot days.

The weather during the early days of the encampment was intensely hot, the thermometer registering on July 2, in one of the hospital tents, 103½° F.

There were many prostrations from heat and many cases of exhaustion. Seven hundred and forty-four cases (all kinds) were admitted to hospitals, and a total of 9,986 received professional aid or treatment during the encampment. This does not include the many thousands who availed themselves of Medical Department provisions for shelter, rest, and water.

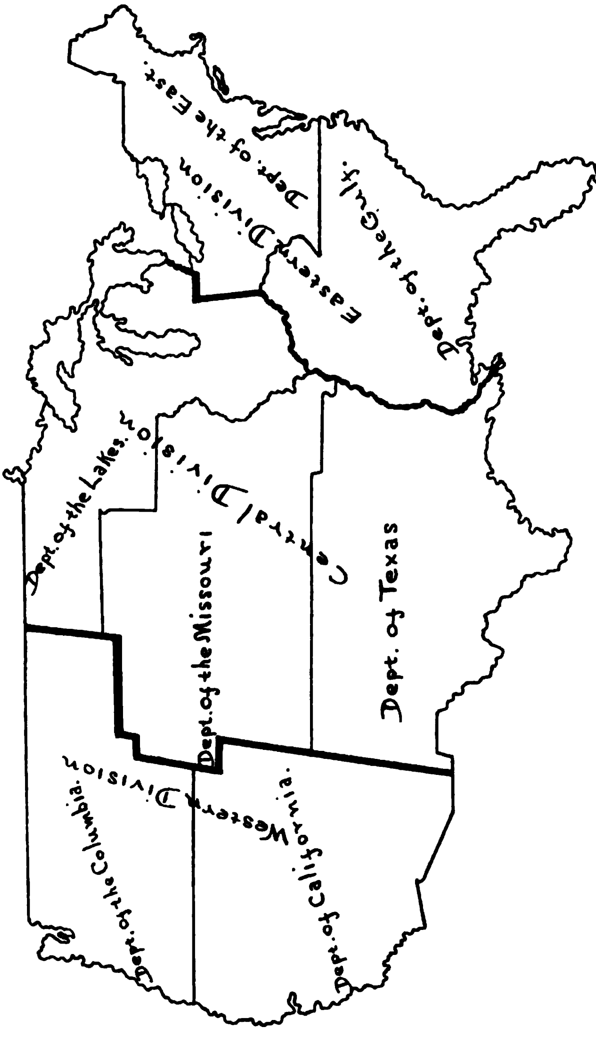
It is said that on July 2, 57,400 were subsisted at the camp. Estimates vary as to the actual number of veterans at the camp, but it seems to be the concensus of opinion that there were not less than 55,000. The time of the encampment extended over a period of eight days, June 29 to July 6, and it is believed that the daily average for those days will approximate 40,000. This indicates that the annual death rate for the period was at the rate of about 10 per 1,000 less than the normal death rate of any community of like size.

It is difficult to get accurate data as to numbers, but it is believed that the above estimates are conservative. It must be admitted that the mortality, the death rate, under the conditions is most remarkably low. The age factor alone would indicate an expected rate far above a normal rate.

The youngest veteran known to have been at the camp was 61 years of age. The oldest alleged that he was 112 years. The average age was probably well over 70 years.

The camp was unique; surely never before in the world's history have so great a number of men so advanced in years been assembled under field conditions.

The sanitary measures used in this camp were similar to those used in military camps in the last few years, and here, as elsewhere, they proved very satisfactory.



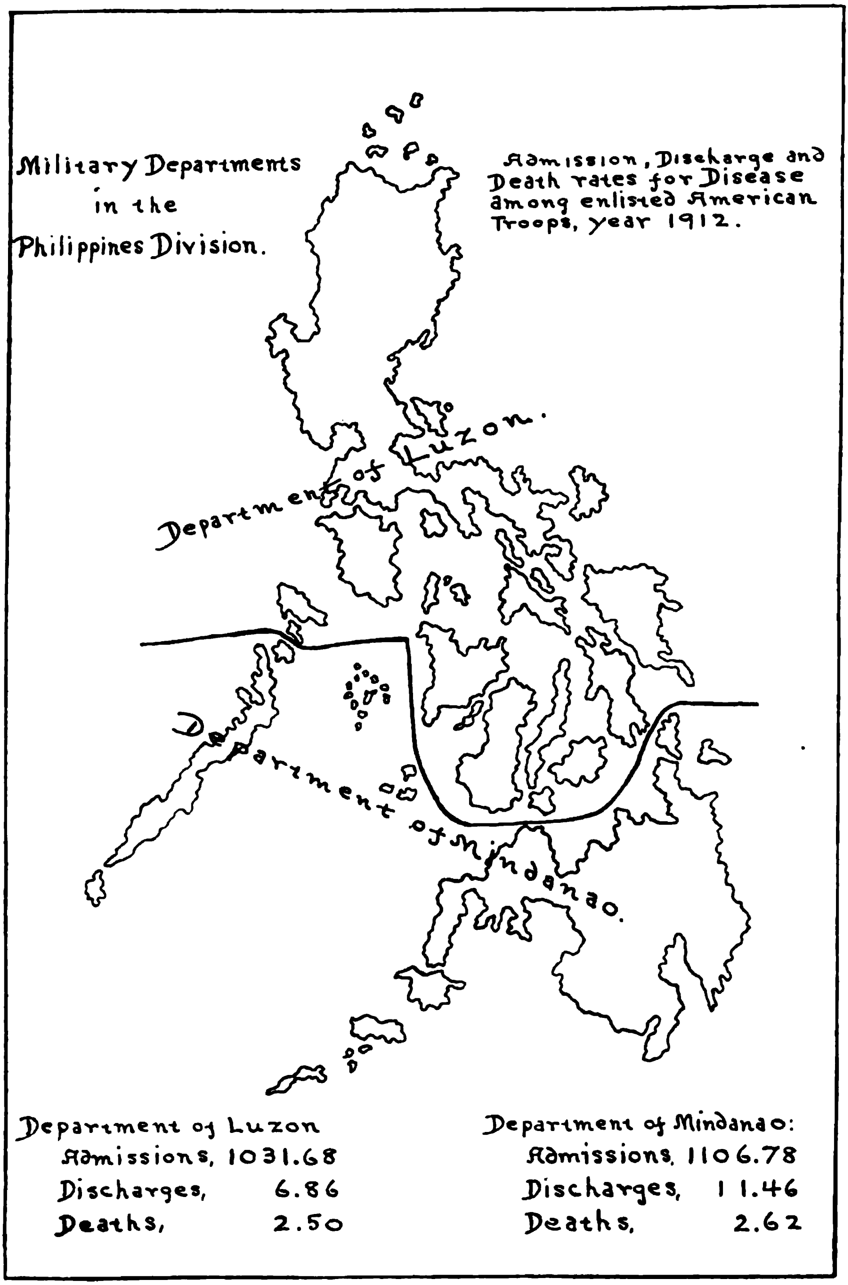
Military Divisions, United States, continental (excluding Alaska) showing the relative Admission, Discharge, and Death rates for Disease {Enlisted men} Year, 1912.

Western Division {Admissions, 533.94
Discharges, .34
Deaths, 1.18}

Central Division {Admissions, 534.12
Discharges, 1.87
Deaths, 2.03}

Eastern Division {Admissions, 524.21
Discharges 1.03
Deaths, 1.33}

Note: Above figures do not include General Hospitals, Recruit Depots, Independent Stations.



Military Departments
in the
Philippines Division.

Admission, Discharge and Death rates for Disease among enlisted American Troops, year 1912.

Department of Luzon
Admissions, 1031.68
Discharges, 6.86
Deaths, 2.50

Department of Mindanao:
Admissions, 1106.78
Discharges, 11.46
Deaths, 2.62

PHILIPPINE ISLANDS.

AMERICAN TROOPS.

The improvement in the health of the American troops stationed in the Philippines noted in the annual reports of this office for several years past was not maintained in the year 1912. As shown in Table No. 3 the constantly noneffective rates for all causes and for diseases were both higher in 1912 than in 1911. The same is also true in regard to admission rates, both the total admission rate and the admission rate for diseases being higher than for 1911. These admission rates were also higher than they were in 1910 and in 1909.

The mean strength of the American troops stationed in the Philippine Islands during the year was 12,357 (S. G. O.). Of this number, 11,006 were white troops and 1,351 colored. In addition there were the Philippine Scouts with a mean strength of 5,407 (S. G. O.), for whom the medical statistics will be given separately on page 112.

CONSTANTLY NONEFFECTIVE RATES.

The total constantly noneffective rate for the year was 44.74; that for the white troops being 44.32, and for the colored 48.10. As has been stated elsewhere the cause for the excessively high noneffective rate for the colored troops was due to the unusually high noneffective rate for venereal diseases for these troops in the Philippines, the rate for this cause being 21.70. The total noneffective rate in 1911 was 43.15 and in 1910 was 45.45. As there were no colored troops stationed in these islands during 1910 and 1911, no comparison can be made with the figures for colored troops for 1912.

The total noneffective rate for disease in 1912 was 39.85 per 1,000, as compared with the corresponding rate of 37.83 for 1911, and 40.34 for 1910.

The following tabulation shows the noneffective rate for some of the principal diseases:

Higher in 1912 than in 1911.

Disease.	1911, total.	1912		
		Total.	White.	Colored.
Malarial fevers	1.78	3.51	3.80	1.14
Dysentery	.90	1.12	1.21	.39
Tuberculosis, all	.29	.53	.47	1.05
Diarrhea and enteritis	.92	1.05	1.07	.89

Lower in 1912 than in 1911.

Disease.	1911, total.	1912		
		Total.	White.	Colored.
Typhoid fever	0.20	0.09	0.10	....
Venereal diseases	16.63	16.55	15.92	21.70
Dengue	1.99	1.90	1.69	3.67
Alcoholism	.43	.35	.36	.26
Rheumatism	.62	.44	.34	.30

It will thus be seen from this tabulation that the principal cause of the increase in the noneffective rate for disease was the rise in the rate for the malarial fevers, the rate increasing from 1.78 in 1911 to 3.51 in 1912. It is interesting to observe that notwithstanding the unusually high noneffective rate for venereal diseases for the colored troops, that due to the decrease in this rate for the white troops, it being 15.92 in 1912 as compared with 16.63 in 1911, the total rate for these diseases in the Philippine Islands showed a slight decrease. The constantly noneffective rate for injuries was slightly lower in 1912 than in 1911, or 1910, it being 4.89 per 1,000 as compared with 5.32 in 1911, and 5.12 in 1910.

ADMISSION RATES.

As stated on page 16 in the tabulation for 1912 the readmissions for what is obviously the same attack of the same disease have been omitted. During the year there were 15,409 case admissions for all causes, white and colored troops, and with a mean strength of 12,357, making a case admission rate of 1,246.99, as compared with the corresponding rate of 1,132 for 1911, 1,144 for 1910, and 1,243 for 1909. The case admission rate for disease was 1,075.34, as compared with 947 for 1911, 956 for 1910, and 1,062 for 1909. The case admission rates for white troops for diseases, injuries, and all causes were 1,025.08, 164.36, and 1,189.44 per 1,000, as compared with the corresponding rates for the colored troops, which were, respectively, 1,484.83, 230.94, and 1,715.77 per 1,000.

The cause for the increased admission rate in 1912 was the same as that for the increased noneffective rate, the great increase in the rate for malarial fevers, this being 171 in 1912, as compared with 75.56 per 1,000 in 1911, or an increase of 95.44 per 1,000.

The case admission rate for injuries was 171.64, as compared with 185 for 1911, 188 for 1910, and 185 for 1909. It is thus apparent that the admission rate for injuries was lower in 1912 than it has been for several years previous.

DISCHARGES ON CERTIFICATES OF DISABILITY.

The American soldiers are very rarely discharged in the Philippines, the cases being invalided home and discharged in the United States, but these are, however, credited to the Philippines. These are the cases shown in the Table No. 28.

The discharge rate for 1912 was 9.63, as compared with the corresponding rate of 11.64 per 1,000 for 1911. The rate for disease was 8.34 per 1,000 and that for injury 1.29, as compared with the corresponding rates of 10.52 and 1.12 in 1911. The total rate for the white troops was 10.18 and that for colored troops was 5.18.

The diseases causing the highest number of discharges were:

	Absolute numbers.	Rate per 1,000.
Mental alienation	27	2.19
Tuberculosis, all	18	1.46
Venereal diseases	14	1.13

The corresponding rates for mental alienation in the United States was 2.78 per 1,000. As stated in the last report this is of interest in view of the general idea which prevails in this country that so many Americans become insane in the Tropics.

TABLE No. 28.—*Discharges for disability, American troops in the Philippine Islands, year 1912.*

Cause of discharge.	Number discharged.	Percentage of discharges for disability for disease.	Discharged for disability.				
			In line of duty.	Not in line of duty.		Discharged for disability before assignment.	
				Contracted before enlistment.	Contracted after enlistment.	In line of duty.	Not in line of duty.
DISEASES.							
General diseases	42	40.78	21	8	13		
Tuberculosis (of the lungs, 17; of other organs, 1)	18	17.48	17	1			
Venereal diseases	14	13.59	1	2	11		
Syphilis (tertiary, 3; secondary, 1; hereditary, 1)	5	4.85		1	4		
Gonorrhea and results (arthritis, 6; chronic urethritis, 2; ophthalmia, 1)	9	8.74	1	1	7		
Alcoholism, chronic	3	2.91		2	1		
Drug habit (cocaine and morphine, 1; morphine, 1)	2	1.94		1	1		
Chronic amoebic dysentery	1	.97	1				
Chronic articular rheumatism	1	.97	1				
Diabetes mellitus	1	.97	1				
Diabetes insipidus	1	.97		1			
Exophthalmic goitre	1	.97		1			
Diseases of the nervous system and organs of special sense	40	38.83	9	29	2		
Mental alienation	27	26.21	5	21	1		
Chronic otitis media	4	3.88	1	3			
Epilepsy	3	2.91		3			
Hysteria	2	1.94		2			
Locomotor ataxia	1	.97			1		
Apoplexy	1	.97	1				
Paraplegia ataxia	1	.97	1				
Chronic neurasthenia	1	.97	1				
Diseases of the bones and organs of locomotion	8	7.77	3	5			
Flat feet	5	4.85		5			
Chronic synovitis	2	1.94	2				
Chronic arthritis	1	.97	1				
Diseases of the respiratory system	5	4.85	3	2			
Asthma, bronchial	4	3.88	3	1			
Goitre, simple	1	.97		1			
Diseases of the genito-urinary system	5	4.85	1	4			
Enuresis, chronic	2	1.94		2			
Chronic parenchymatous nephritis	1	.97	1				
Nephrolithiases	1	.97		1			
Cystitis, chronic	1	.97		1			
Diseases of the circulatory system	2	1.94	2				
Valvular heart disease	1	.97	1				
Phlebitis, chronic	1	.97	1				
Diseases of the digestive system	1	.97	1				
Gastro enteritis, chronic	1	.97	1				
Total	103	100.00	40	48	15		
EXTERNAL CAUSES.							
Fractures	5	31.25	5				
Incised wounds	2	12.50	2				
Sprains	2	12.50	2				
Effects of injuries, received prior to enlistment	2	12.50		2			
Gunshot wound	1	6.25	1				
Crushing	1	6.25	1				
Dislocation, chronic	1	6.25	1				
Concussion of brain	1	6.25	1				
Lacerated wound	1	6.25			1		
Total	16	13.45	13	2	1		
Total for disease	103	86.55	40	48	15		
Total for external causes	16	13.45	13	2	1		
Grand total	119	100.00	53	50	16		

DEATHS.

Deaths occurring in the United States in persons invalided home from the Philippine Islands are credited to the Philippines. There were 69 deaths in 1912, 37 from disease and 32 from external causes, the total rate being 5.26 per 1,000, that for disease 2.82, and for injuries 2.44. These figures are taken from Table No. 29 and are for officers and enlisted men. The figures are slightly different from those given in Table No. 72 in the back of the report, which are for enlisted men only and show only 67 deaths. The corresponding rates for 1911, officers and enlisted men, were, total 5.30 per 1,000, diseases 1.93, and injuries 3.37 per 1,000. It is thus apparent that the rate for disease is considerably higher in 1912 and that for injuries it is lower, while the total rate is slightly lower. There were 13 deaths from drowning in 1912 and 8 in 1911; 3 from suicide in 1912 and 9 in 1911; 4 from homicides in 1912, and 6 in 1911. No officer or soldier, American troops, was killed in action in 1912, while 4 enlisted men and 1 officer were killed in action in 1911.

Tuberculosis caused 7 deaths in 1912 and 1 in 1911; malaria 4 deaths in 1912 and 1 in 1911; syphilis 3 in 1912 and 1 in 1911; organic disease of the heart 1 in 1912 and 5 in 1911.

TABLE No. 29.—*Causes of death, American troops, Philippine Islands, year 1912—Officers and enlisted men.*

Cause of death.	Number of deaths.	Ratio per 1,000 of— Mean strength.	Ratio per 1,000 of— Deaths from disease.
DISEASES.			
Tuberculosis (lungs, 6; other organs, 1)	7	0.53	189.19
Malarial fever estivo-autumnal	4	.30	108.11
Syphilis (tertiary, 2; secondary, 1)	3	.23	81.08
Alcoholism (acute, 1; delirium tremens, 2)	3	.23	81.08
Abscess of the liver	3	.23	81.08
Appendicitis	3	.23	81.08
Nephritis, chronic parenchymatous	2	.15	54.05
Dysentery, chronic entamoebic	1	.08	27.03
Purulent infection	1	.08	27.03
Cancer	1	.08	27.03
Rheumatism, acute articular	1	.08	27.03
Spontaneous rupture of vein (patient was a hemophilia)	1	.08	27.03
Cerebro-spinal meningitis, acute	1	.08	27.03
Cardiac dilatation	1	.08	27.03
Valvular heart disease	1	.08	27.03
Angina pectoris	1	.08	27.03
Aneurism	1	.08	27.03
Gastritis, chronic	1	.08	27.03
Cholecystitis	1	.08	27.03
Total	37	2.82	1,000.00
EXTERNAL CAUSES.			
Drowning (all accidental)	13	.99	406.25
Gunshot wounds (shot by sentry, 1; homicidal, 1; suicidal, 4; accidental, 3)	9	.69	281.25
Incised wounds (all homicidal)	3	.23	93.75
Fractures (fall from window, 1; from cliff, 1; from moving car, 1)	3	.23	93.75
Crushing (run over by trolley car, 1; struck by pieces of broken machinery following gasoline explosion, 1)	2	.15	62.50
Punctured wound (homicide)	1	.08	31.25
Concussion (struck by locomotive)	1	.08	31.25
Total	32	2.44	1,000.00
Total for disease	37	2.82	536.23
Total for external causes	32	2.44	463.77
Grand total	69	5.26	1,000.00

PREVALENCE OF SPECIAL DISEASES, AMERICAN TROOPS (ENLISTED MEN).

TYPHOID FEVER.

The admission rate per 1,000 was 0.40, as compared with 0.88 in 1911 and 2.53 for 1910. This rate was higher than that for the American Army as a whole, which was 0.27. In absolute numbers there were 5 cases among the enlisted men, and these occurred at Camp Keithley in men infected while in the field, in that vicinity. None of them had been immunized. There was no death. Especial mention is made of this subject under the discussion for the United States.

Table No. 30.—*Typhoid fever, Philippine Islands, year 1912, officers and enlisted men, American and native troops.*

Posts.	Mean strength.	Admissions.							
		Americans (mean strength, 13,115).				Philippine scouts (mean strength, 5,407).		Total.	
		Officers.		Enlisted men.					
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Camp Keithley	1,288	....	....	5	....	....	....	5	....
Camp Gregg	859	....	....	....	....	1	1	1	1
Torrey Barracks	314	....	....	....	....	1	....	1	....
Field, Department Luzon	1,132	....	....	....	....	1	....	1	....
Philippines division, total	18,522	....	....	5	....	3	1	8	1

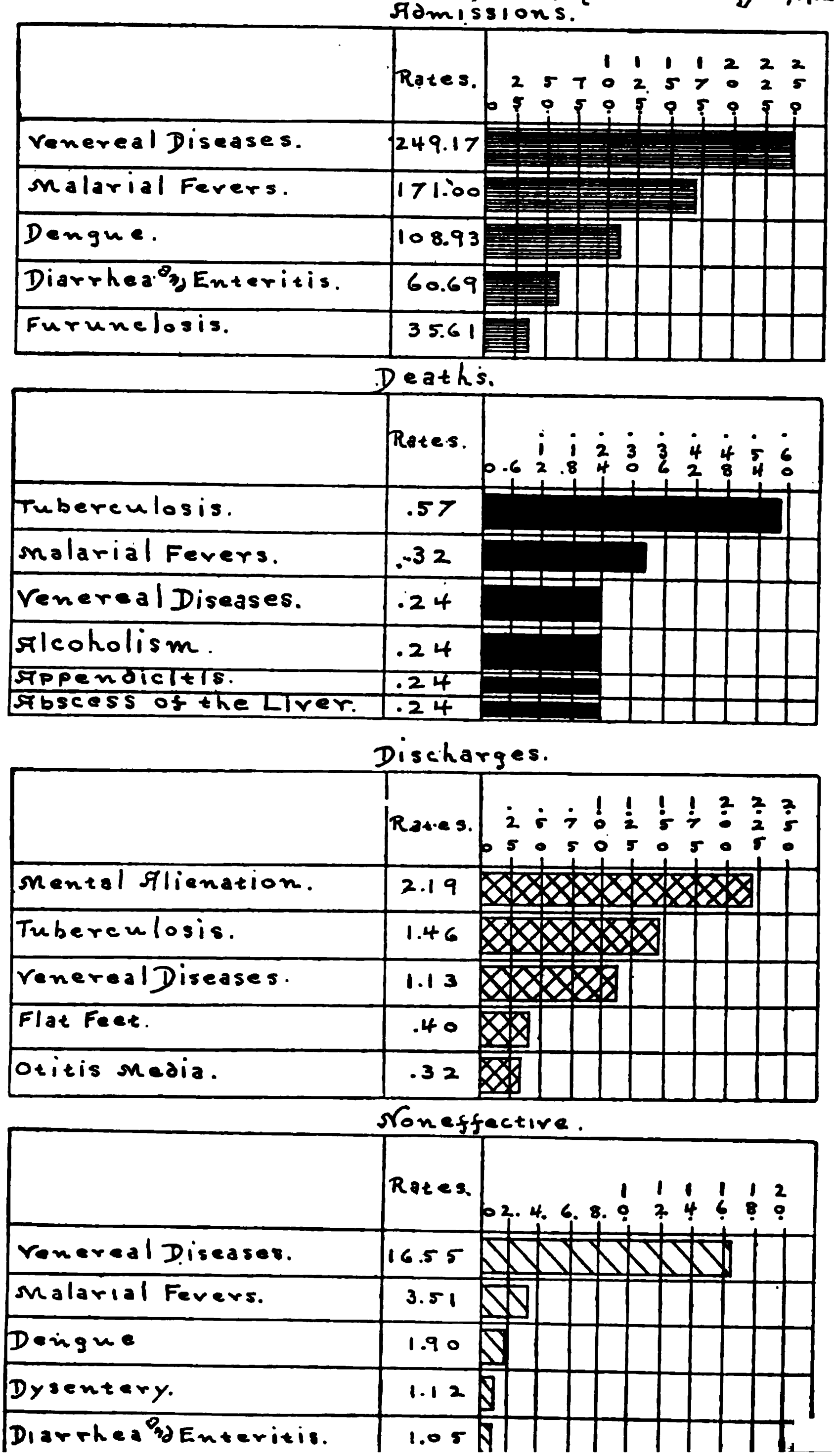
MALARIAL FEVERS.

The admission rate for all fevers of this class was 171.00, as compared with 75.56 for 1911, 86.34 for 1910, 112.35 for 1909, 123.97 for 1908, 167.79 for 1907, and 304.20 for 1906. Malarial fevers stand second among causes of admission for disease for American troops.

It will be noted that the rate for 1912 was higher than that for any year since 1906. The reason for the great increase is not apparent. It is true that the greatest increase occurred in the Department of Mindanao, where the troops were in the field a great deal engaged in operations against hostile natives. However, there was also an increase in the rates for all, except a few, of the posts in the Department of Luzon. The table below gives the rates at all posts in the Philippine Islands where the majority of the garrison was American troops. It will be noted that only four posts showed a decreased rate, namely, Fort Mills, Cuartel de Espana (Manila), Warwick Barracks, and Camp John Hay. It is difficult to understand why field service and meteorological conditions should have caused such a large increase in the rate for American troops without causing same increase in the rate for the native troops, who had fully as much field

Chart W

Admission, Discharge, Death and Noneffective Rates for Special Diseases, Philippine Islands American Troops {Enlisted Men} year, 1912.



Admissions.

	Rates.
Venereal Diseases.	249.17
Malarial Fevers.	171.00
Dengue.	108.93
Diarrhea and Enteritis.	60.69
Furunclosis.	35.61

Deaths.

	Rates.
Tuberculosis.	.57
Malarial Fevers.	.32
Venereal Diseases.	.24
Alcoholism.	.24
Appendicitis.	.24
Abscess of the Liver.	.24

Discharges.

	Rates.
Mental Alienation.	2.19
Tuberculosis.	1.46
Venereal Diseases.	1.13
Flat Feet.	.40
Otitis Media.	.32

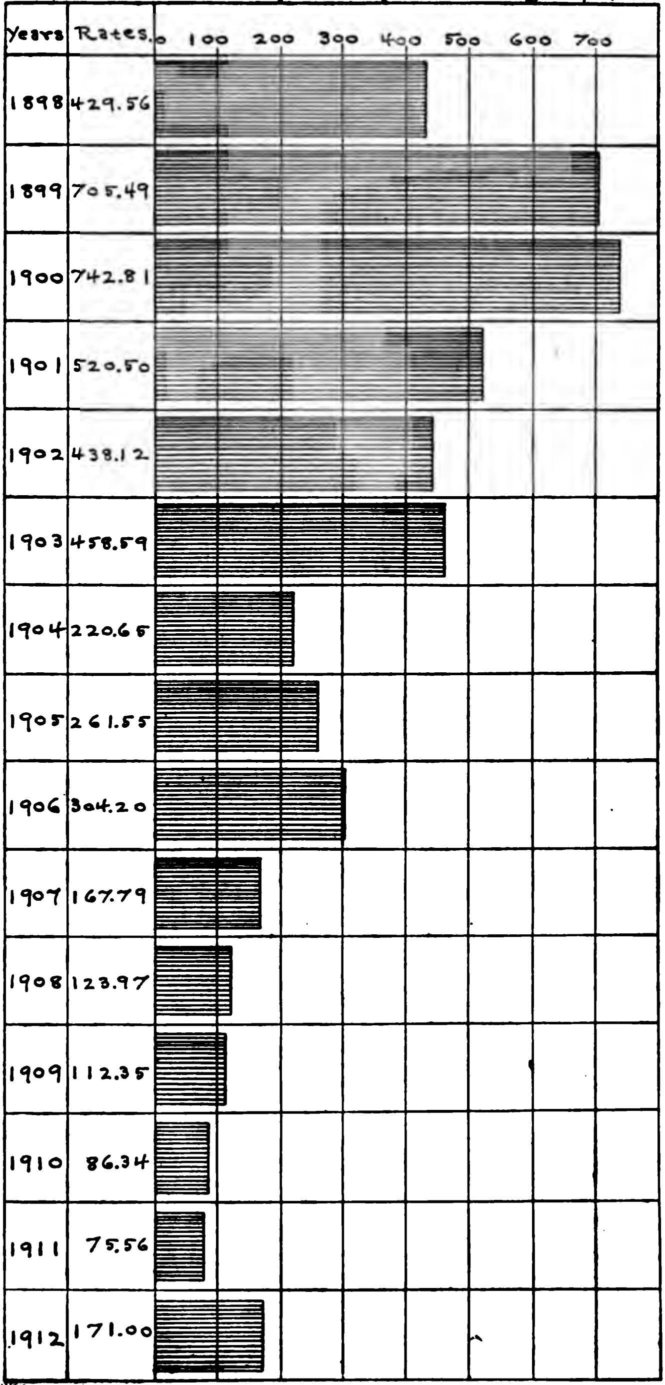
Noneffective.

	Rates.
Venereal Diseases.	16.55
Malarial Fevers.	3.51
Dengue	1.90
Dysentery.	1.12
Diarrhea and Enteritis.	1.05

Chart X.

Malarial Fevers.
Admission Rates.

Admission Rates for Malarial Fevers for the Philippine Islands, American Troops, Enlisted Men, Years, 1898-1912.



service and who were exposed to the same meteorological conditions. The rate for the native troops showed a slight decrease, being 241.91 in 1912 and 242.12 in 1911. At the suggestion of this office, a cablegram was sent by The Adjutant General to the commanding general, Philippine Department, June 30, 1913, calling attention to the great increase in the rate for this cause for American troops.

The post having the highest admission rate was Ludlow Barracks, Mindanao, with a rate of 550.00 per 1,000. The second highest admission rate was for Augur Barracks, 459.39 per 1,000. The rates for these posts in 1911 was 51.57 and 279.30, respectively. The Department of Mindanao had the higher rate, 385.52 per 1,000. The rate for the Department of Luzon was 97.32 per 1,000. The rate for the Department of Mindanao in 1911 was 146.60 and for Luzon 58.90 per 1,000.

TABLE No. 31.—*Malarial fevers, year 1912, compared with 1911, for posts in the Philippine Islands in which the commands are composed principally of American troops—Officers and enlisted men.*

Posts.	Ratios per 1,000 of mean strength.	
	1912	1911
Ludlow Barracks, Mindanao	550.00	51.57
Angur Barracks, Mindanao	459.39	279.30
Pettit Barracks, Mindanao	338.58	104.51
Camp Overton, Mindanao	335.71	74.43
Camp Stotsenburg, Luzon	259.74	238.14
Camp Keithley, Mindanao	198.76	44.40
Fort Wint, Luzon	194.33	83.66
Camp Downes, Luzon	191.11	19.68
Camp Eldridge, Luzon	145.65	84.75
Fort William McKinley, Luzon	104.71	22.52
Camp McGrath, Luzon	50.36	16.79
Fort Mills, Luzon	45.37	101.62
Camp Jossman, Luzon	31.86	23.50
Cuartel de Espana, Luzon	22.97	7.42
Warwick Barracks, Luzon	6.17	17.09
Camp John Hay, Luzon	9.35	6.67
Santiago and Headquarters, Manila	10.58	27.03

UNDETERMINED FEVERS.

The admission rate for these fevers was 15.46 per 1,000, as compared with 6.74 for 1911, 10.75 for 1910, and 25.46 for 1909. The various diagnoses under this head are as follows:

Febricula	104
Fevers, simple, continued	34
Fever, type undetermined	53
Total cases	191

SMALLPOX.

No case of this disease occurred.

VENEREAL DISEASES.

Venereal diseases still hold first place for both admissions and noneffective rate. About one-fourth of the total number of admissions for disease were due to venereal diseases. There were 1,719 admissions for gonorrhea, 832 for chancroid, and 528 for syphilis. A little more than two-fifths of the total noneffective rate for disease was due to venereal diseases. It is a source of satisfaction to this office, however, to be able to state that the rates for these diseases were better in 1912 than 1911. The noneffective rate in 1912 was 16.55 and in 1911 16.63 per 1,000. The admission rate in 1912 was 249.17, and in 1911 305.12 per 1,000. As has been stated under the discussion for the Army, and for the United States, the rates for the white troops showed a very material improvement, but the excessively high rate for the colored troops prevented a greater decrease in the total figures for the American troops. The noneffective and admission rates for white troops in 1912 was 15.92 and 215.43, and in 1911, 16.63 and 305.12 per 1,000. Those for the colored troops in 1912 were 21.70 and 524.06 per 1,000. There were no colored troops serving in the Philippine Islands in 1911.

Venereal diseases, Philippine Islands.

	Syphilis.	Chancroids.	Gonorrhea.	Total.
White troops, 1912	45.07	56.06	114.30	215.43
1911	78.05	88.48	138.59	305.12
Colored troops, 1912	23.69	159.14	341.23	524.06
All American troops, 1912	42.73	67.33	139.11	249.17
1911	78.05	88.48	138.59	305.12

In accordance with the recommendation of this office The Adjutant General, on July 16, 1913, sent a cablegram to the commanding general Philippine Department calling attention to the excessively high rates among the colored troops and the high rates at the three posts other than Camp Jossman, with the highest rates. The colored troops were stationed at Camps Jossman, McGrath, and Stotsenburg.

TABLE No. 32.—*Venereal diseases at posts in the Philippines having strength of more than 300 men (principally American troops), year 1912—Officers and enlisted men.*

Posts.	Admissions.		Mean strength.
	Total.	Ratio.	
Camp Jossman	182	446.08	408
Camp McGrath	355	425.66	834
Fort William McKinley	1,015	314.44	3,228
Camp Stotsenburg	376	305.19	1,232
Camp Eldridge	100	217.39	460
Augur Barracks	232	209.39	1,108
Cuartel de Espana	130	175.68	740
Fort Santiago and Headquarters Philippines Division	55	145.50	378
Warwick Barracks	44	135.80	324
Ludlow Barracks	63	108.62	580
Camp Connell[1]	36	103.45	348
Fort Mills	127	76.83	1,653
Regan Barracks[1]	25	75.53	331
Camp Keithley	93	72.20	1,288
Pettit Barracks	35	68.90	508
Camp Gregg[1]	37	43.07	859
Torrey Barracks[2]	12	38.22	314

[1] At Camp Connell, Regan Barracks, and Camp Gregg the commands were composed almost entirely of Philippine Scouts.

[2] About two-thirds of the command at Torrey Barracks were Philippine Scouts.

ALCOHOLISM AND ITS RESULTS.

The admission rate, 21.20, was lower than 28.50 for 1911. The noneffective rate was 0.35 in 1912 and 0.43 per 1,000 in 1911. The rates for 1911 were for white troops, as there were no colored troops in the islands. In 1912 the noneffective and admission rates for white troops were 0.36 and 22.17. Those for colored troops were 0.26 and 13.32.

CHOLERA.

No case of this disease occurred during the year, nor were any epidemics reported in the vicinity of military posts.

TUBERCULOSIS.

There were 62 cases among the American troops, a ratio of 5.02 per 1,000. These cases were all promptly transferred home, and no deaths occurred there from the disease. The seven deaths reported occurred in cases transferred to the United States. In 1911 there were 47 cases with a ratio of 3.77 and in 1910, 67 cases, with a rate of 5.46 per 1,000.

BERIBERI.

No case of this disease occurred among the American troops.

DYSENTERY.

The occurrence of this disease shows an increase over 1911, being 16.91 per 1,000, as compared with 14.37 per 1,000 for 1911, 19.39 for 1910, 43.06 for 1909, and 26.23 for 1908. There were 167 cases of entamoebic dysentery, with a rate of 13.51, 11 cases of bacillic, with a rate of 0.89, and 31 unclassified, with a rate of 2.51 per 1,000. The noneffective rate for all dysentery was 1.12 per 1,000 for 1912 and 0.90 for 1911.

DENGUE.

This disease had the third highest admission and noneffective rate. There were 1,346 cases with an admission rate of 108.93 per 1,000 and noneffective rate of 1.90, as compared with 1,444 admissions in 1911, with an admission rate of 115.95 and noneffective rate of 1.99. There were no deaths or discharges for disability resulting.

MENTAL ALIENATION.

As there are several mental conditions grouped this year under this heading which were formerly not included under the term insanity, no comparison can be made between the two. The admission rate for mental alienation was 3.56 for American troops in the Philippine Islands. In the United States the rate was 3.26.

DIARRHEA AND ENTERITIS.

The admission rate for these diseases shows quite a large increase over 1911, being 60.69 per 1,000, as compared with 46.09 for 1911, 74.86 for 1910, and 59.79 for 1909. The noneffective rate was 1.05 per 1,000 in 1912, as compared with 0.92 for 1911 and 1.38 for 1910.

INVALIDING TO THE UNITED STATES.

The diseases causing the highest number of men to be invalided home were with actual numbers: Tuberculosis, 56; mental alienation, 45; gonorrhea, 21; syphilis, 10; and dysentery and chronic alcoholism, each 6.

TABLE No. 33.—*Enlisted men invalided home from the Philippine Islands.*

Causes.	Number of cases.	Percentage of total cases.	Duty.	Discharged on certificate of disability.	Died.	Otherwise disposed of.	Remaining at end of year.
Tuberculosis	56	25.69		12	5	1	38
General paralysis of the insane, and other forms of mental alienation	45	20.64	2	32			11
Gonorrhea	21	9.63	4	9			8
Syphilis	10	4.59	3	5			2
Dysentery	6	2.75	5	1			
Chronic alcoholism	6	2.75		3		1	2
Chronic otitis media	5	2.29		4			1
Secondary results of injury	5	2.29	1	3			1
Hysteria	4	1.83		2			2
Asthma	4	1.83	1	3			
Fractures, exclusive of gunshot	4	1.83		4			
Epilepsy	3	1.38		3			
Chronic bronchitis	3	1.38	3				
Drug habit	2	.92		2			
Chronic gastritis	2	.92					2
Abscess of the liver	2	.92	1				1
Enuresis	2	.92		1			1
Cancer	2	.92		1	1		
Flat foot	2	.92		2			
Incised wounds	2	.92		2			
Locomotor ataxia	2	.92		1			1
Exophthalmic goiter	1	.46	1				
Appendicitis	1	.46			1		
Chronic articular rheumatism	1	.46		1			
Diabetes mellitus	1	.46		1			
Progressive muscular atrophy	1	.46		1			
Cerebral hemorrhage	1	.46		1			
Neuritis	1	.46				1	
Traumatic neurosis	1	.46					1
Trachoma	1	.46		1			
Hypermetropia	1	.46	1				
Hypertrophy of the heart	1	.46					1
Phlebitis	1	.46		1			
Broncho-pneumonia	1	.46	1				
Chronic fibrinous pleurisy	1	.46					1
Ulcer of the stomach	1	.46					1
Chronic colitis	1	.46					1
Chronic gastroenteritis	1	.46		1			
Fistula in ano	1	.46					1
Sprue	1	.46	1				
Nephrolithiasis	1	.46		1			
Chronic nephritis	1	.46			1		
Chronic cystitis	1	.46		1			
Painful testicle, post operative	1	.46					1
Necrosis	1	.46	1				
Arthritis	1	.46		1			
Punctured wounds	1	.46					1
Crushing	1	.46		1			
Dislocation	1	.46		1			
Sprain	1	.46		1			
Ruptured liver	1	.46	1				
Total cases	218		26	103	8	3	78
Percentage of total cases		100.00	11.93	47.25	3.67	1.38	35.78

INFLUENCE OF STATION.

The Department of Mindanao had the higher rates for admissions, discharges for disability, deaths, and total losses, while the Department of Luzon had the higher noneffective rate and higher average number of days lost for each case.

TABLE No. 34.—*Movement of sick enlisted American troops in the Philippines, year 1912.*

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.		For each soldier.	For each case.	For each soldier.	For each case.
										Total.	In hospital.	Total.	In hospital.				
Department of Luzon	9,186	1,216.09	737.11	8.17	5.55	4.35	2.17	12.52	7.72	38.81	34.67	18.74	16.66	14.21	11.68	6.86	9.30
Department of Mindanao	3,053	1,238.13	941.04	12.77	10.48	6.22	2.29	18.99	12.77	36.71	35.74	22.13	21.65	13.44	10.85	8.10	8.60
Philippines Division	12,357	1,246.99	803.92	9.63	6.96	5.42	2.51	15.05	9.47	44.74	41.41	22.93	21.26	16.37	13.13	8.39	10.44

NOTE.—Division hospital and interisland transports not included in departments, but are included in the division.

INFLUENCE OF SEASON.

Exclusive of injuries, venereal diseases, alcoholism, and vaccinia, which are not influenced by season, the highest admission rate occurred in July and the highest noneffective rate was in July and the second highest in June.

TABLE No. 35.—*Influence of season on enlisted American troops in the Philippines, year 1912.*

Months.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and injuries.			
		Admissions.		Deaths.	Noneffective.		Admissions.	Deaths.	Noneffective.	
		Total.	Hospital.		Total.	Hospital.				
January.....	14,315	100.03	91.02	0.63	43.50	39.97	58.95	0.21	20.91	Malarial fever 151, diarrhea and enteritis 68, constipation 46, dengue 44.
February...	15,180	84.78	68.05	.40	42.84	39.36	51.38	.....	20.97	Malarial fever 180, diarrhea and enteritis 62, dengue 38, acute abscesses 31.
March......	13,718	100.45	87.11	.36	45.16	41.72	65.24	.15	22.99	Malarial fever 287, furuncles 44, dengue 73, diarrhea and enteritis 68.
April.......	13,573	97.62	88.63	.74	45.03	41.53	68.45	.44	22.38	Malarial fever 288, dengue 110, diarrhea and enteritis 69, furuncles 36.
May........	12,075	113.87	105.26	.33	46.90	43.75	75.11	.08	23.96	Malarial fever 234, dengue 140, diarrhea and enteritis 64, constipation 36.
June........	11,040	124.46	115.31	.45	52.05	48.51	84.15	.....	25.66	Malarial fever 273, dengue 126, diarrhea and enteritis 65, furuncles 40.
July........	11,275	136.14	123.99	.35	51.50	48.34	92.41	.18	26.99	Malarial fever 219, dengue 157, diarrhea and enteritis 71, constipation 61, furuncles 54.
August......	11,478	121.62	106.90	.35	48.77	44.26	83.20	.09	25.36	Malarial fever 134, dengue 246, diarrhea and enteritis 119, constipation 46.
September..	11,585	112.99	98.83	.17	48.07	43.18	67.93	.....	23.81	Malarial fever 104, dengue 151, diarrhea and enteritis 63.
October.....	11,321	99.46	88.51	.44	43.60	40.00	61.74	.26	22.25	Malarial fever 95, dengue 145, diarrhea and enteritis 34, constipation 37.
November..	11,174	84.57	75.17	.54	35.23	33.44	52.17	.09	20.59	Malarial fever 75, dengue 61, furuncles 39.
December...	11,546	80.28	74.13	.61	35.35	34.06	50.58	.09	20.61	Malarial fever 73, dengue 55, diarrhea and enteritis 34.
Totals.	12,357	1,246.99	1,112.41	5.42	44.74	41.41	803.92	2.51	22.93	Malarial fever 2,113, diarrhea and enteritis 717, dengue 1,346, furuncles 213.

The highest rate for malarial fevers was in April, and for dengue in August. The lowest admission rate was in February and the lowest noneffective rate in November. The highest death rate occurred in April. As the influence of season varies so widely for the different islands, it is hardly possible to obtain any accurate information by comparing the division as a whole.

INFLUENCE OF AGE (DISEASE ONLY).

Excluding injuries, the highest admission rate was for those under 20 years of age, and the highest noneffective rate for those 20 to 24. The noneffective and admission rates were lowest for those 45 to 49 years. The death rate was highest for those 40 to 44 years of age. The discharge rate was highest for those 25 to 29 years of age.

LENGTH OF SERVICE (DISEASE ONLY).

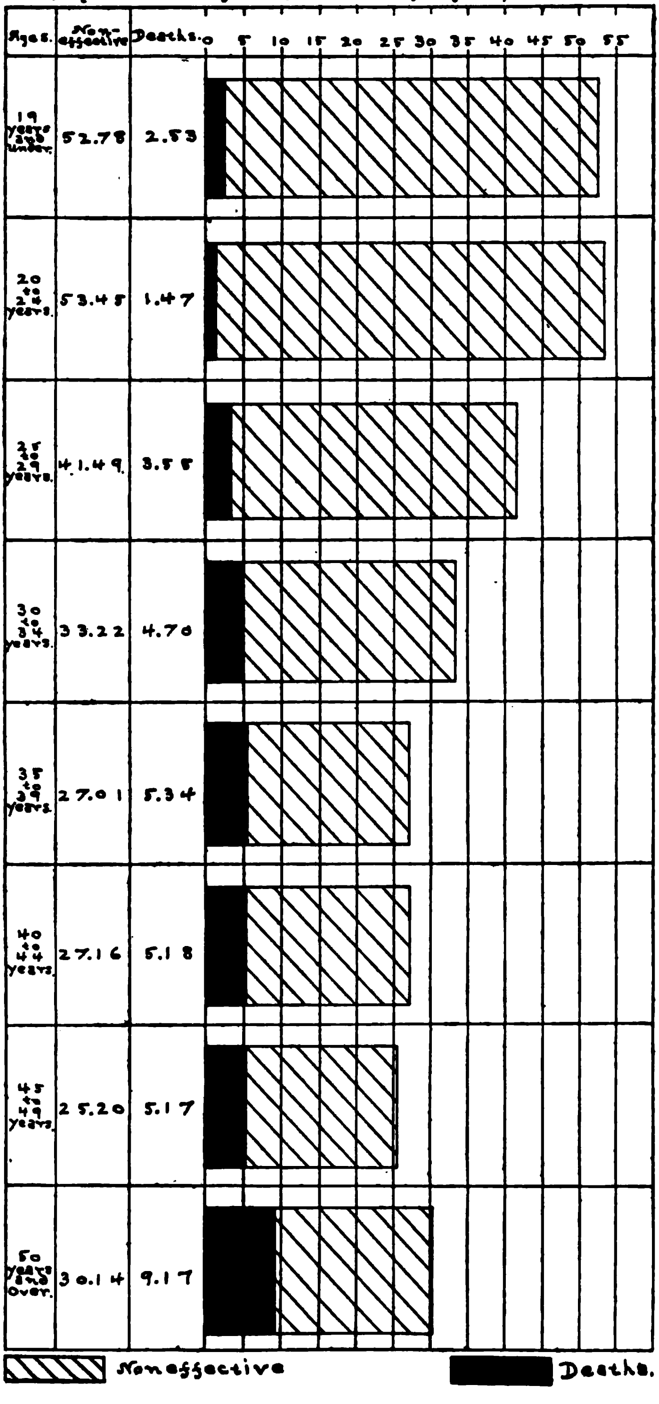
Excluding injuries the highest noneffective and admission rates occurred in the first year of service; the second highest noneffective and admission rates in the second year; the lowest noneffective and admission in those having 10 years or over. The highest discharge rate occurred in the second year of service, and the lowest in the third. The highest death rate was in those having between five and ten years' service, and the lowest for those in the first year of service.

Table No. 36.—*Influence of disease by length of service, age, and arms of service, on American troops in the Philippines, year 1912—Enlisted men.*

	Mean strength.	Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.	Ratio per 1,000 of mean strength.			
						Admitted.	Discharged on certificate of disability.	Died.	Constantly noneffective.
Length of service:									
Under 1 year	2,610	3,957	23	2	154.07	1,516.09	8.81	0.77	59.03
1 to 2 years	2,805	4,090	36	6	148.05	1,458.11	12.83	2.14	52.78
2 to 3 years	1,263	873	5	2	27.49	691.22	3.96	1.58	21.76
3 to 4 years	852	685	6	3	29.48	803.99	7.04	3.52	34.60
4 to 5 years	880	899	7	2	33.70	1,021.59	7.95	2.27	38.30
5 to 10 years	1,651	1,413	14	11	50.61	855.84	8.48	6.66	30.65
10 years and over	2,296	1,371	12	11	48.99	597.13	5.23	4.79	21.34
Total	12 357	13,288	103	37	492.39	1,075.34	8.34	2.99	39.85
Age:									
19 years and under	500	674	3	1	23.51	1,348.00	6.00	2.00	47.02
20 to 24 years	5,038	6,567	38	4	239.19	1,303.49	7.54	.79	47.48
25 to 29 years	2,975	3,275	36	10	128.08	1,100.84	12.10	3.36	43.06
30 to 34 years	1,819	1,567	14	11	57.92	861.46	7.70	6.05	31.84
35 to 39 years	1,079	644	10	4	22.03	596.85	9.27	3.71	20.41
40 to 44 years	639	403	1	7	15.46	630.67	1.56	10.95	24.19
45 to 49 years	243	115	1	......	4.50	473.25	4.12	......	18.52
50 years and over	64	43	....	......	1.70	671.87	....	......	26.55
Total	12,357	13,288	103	37	492.39	1,075.34	8.34	2.99	39.85
Arms of service:									
Infantry	6,428	6,740	46	25	251.07	1,048.54	7.16	3.89	39.06
Cavalry	2,676	3,336	24	6	127.36	1,246.64	8.97	2.24	47.56
Field Artillery	801	1,032	12	1	35.81	1,288.39	14.98	1.25	44.70
Coast Artillery	1,120	906	10	1	31.25	808.93	8.93	.89	27.90
Ordnance	70	29	....	......	.69	414.29	....	......	9.91
Engineers	304	340	2	1	10.91	1,118.42	6.58	3.29	35.89
Signal Corps	163	114	....	......	4.57	699.39	....	......	28.04
Hospital Corps	711	534	9	3	16.33	751.05	12.66	4.22	22.97
All others	84	257	....	......	14.40	3,059.52	....	......	171.42
Total	12,357	13,288	103	37	492.39	1,075.34	8.34	2.99	39.85

Chart Y.

Noneffective and Death Rates for Disease, by Ages, American Troops {Enlisted Men} Philippine Islands, for five years, 1908-1912.



Ages.	Non-effective	Deaths.
19 years and under.	52.78	2.53
20 to 24 years.	53.45	1.47
25 to 29 years.	41.49	3.58
30 to 34 years.	33.22	4.70
35 to 39 years.	27.01	5.34
40 to 44 years.	27.16	5.18
45 to 49 years.	25.20	5.17
50 years and over.	30.14	9.17

PHILLIPPINE SCOUTS.

The improvement in the health of the native troops in the Philippine Islands noted in the annual reports of this office in years past was not maintained in 1912. While the admission rate showed a slight improvement, the noneffective rate was slightly higher in 1912 than in 1911. The mean strength of these native troops during the year was 5,407 (Surgeon General's Office) and 5,493 (Adjutant General's Office).

CONSTANTLY NONEFFECTIVE RATES.

The total noneffective rate for 1912 was 20.32 per 1,000 as compared with 19.86 in 1911. The rate for disease was 17.92 per 1,000 in 1912, and 17.69 in 1911, while that of injuries was 2.40 in 1912 and 2.17 per 1,000 in 1911. Thus the total rates, that for disease and that for injuries, were all higher in 1912 than in 1911. The following tabulations shows noneffective rates of the principal diseases in 1912, and the corresponding rates for 1911:

	1912	1911		1912	1911
Lower in 1912.			*Higher in 1912.*		
Malarial fevers	4.19	4.55	Venereal diseases	3.75	3.63
Dysenteries	.38	.52	Tuberculosis (all)	.91	.34
Typhoid fever	.10	.38	Dengue	.33	.31
Beriberi	.05	.12	Bronchitis	.76	.57
Alcoholism	.003	.004	Febricula	.19	.12

The rate for diarrhea and enteritis was exactly the same in 1912 a in 1911, being 0.26 per 1,000.

ADMISSIONS.

During the year there were 3,667 admissions for all causes, giving a case admission rate of 678.20 per 1,000. The rate for disease was 617.16 and that for injury 61.04 per 1,000. The admission rate for 1911 for all causes was 744.78; for disease, 666.54, and for injuries, 78.24 per 1,000. It is thus apparent that the rates for 1912 were all slightly lower than the corresponding rates in 1911. The following tabulation gives the rates for some of the principal diseases in 1912 and 1911:

	1912	1911		1912	1911
Lower in 1912.			*Higher in 1912.*		
Malarial fevers	241.91	242.12	Dengue	23.12	15.38
Venereal diseases	55.67	58.11	Tuberculosis (all)	5.92	3.23
Dysenteries	7.03	7.79	Bronchitis	28.30	21.65
Diarrhea and enteritis	18.86	20.89	Febricula	10.36	8.55
Typhoid fever	.56	2.28			
Alcoholism	.37	.76			
Beriberi	.37	.57			

It must be held in mind that the rates above for 1912 are case admissions and in 1911 total admissions. The total admission rates for malarial fevers and venereal diseases are slightly higher than the corresponding rates in 1911.

TABLE No. 37.—*Movement of sick, Philippine Scouts, enlisted men, year 1912.*

	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
	Total.	In hospital.	Total.	In hospital.
Ratio per 1,000 of mean strength:				
Admissions to sick report	678.20	610.32	560.39	
Discharges on certificate of disability	8.19		6.55	
Deaths	4.37		3.09	
Total losses	14.56		9.64	
Noneffective	20.32	19.18	14.16	13.41
Average number of days lost:				
For each soldier	7.44	7.02	5.18	4.91
For each case	10.96	11.50	9.25	

DISCHARGE FOR DISABILITY.

In 1912 there were 45 discharges on certificate of disability with a rate of 8.19 as compared with 26 and a rate of 4.94 for 1911. Tuberculosis caused 23 discharges in 1912 and 11 in 1911; venereal diseases 2 in 1912 and none in 1911; mental alienation 5 in 1912 and insanity 5 in 1911, and external causes 7 in 1912 and 3 in 1911.

TABLE No. 38.—*Causes of discharge for disability, Philippine Scouts, year 1912.*

Causes of discharge.	Number discharged.	Percentage of discharges for disease.	In line of duty.	Not in line of duty.	
				Contracted before enlistment.	Contracted after enlistment.
General diseases	27	71.05	25		2
Tuberculosis (of the lungs, 22; other organs, 1)	23	60.53	23		
Venereal diseases (arthritis chronic, 1; urethritis, chronic, 1)	2	5.26			2
Erysipelas	1	2.63	1		
Cancer	1	2.63	1		
Diseases of the nervous system and organs of special sense	8	21.05	5	3	
Mental alienation	5	13.16	3	2	
Hysteria	1	2.63		1	
Neurasthenia, chronic	1	2.63	1		
Retino choroiditis	1	2.63	1		
Diseases of the digestive system	2	5.26	1	1	
Dental caries	1	2.63		1	
Fistula in ano	1	2.63	1		
Diseases of the bones and organs of locomotion	1	2.63	1		
Muscular rheumatism, chronic	1	2.63	1		
Total for disease	38	100.00	32	4	2
External causes	7	100.00	7		
Gunshot wounds	3	42.86	3		
Incised wounds	3	42.86	3		
Crushing	1	14.28	1		
Total for disease	38	84.44	32	4	2
Total external causes	7	15.56	7		
Grand total	45	100.00	39	4	2

DEATHS.

There were 24 deaths with a rate of 4.37 per 1,000 in 1912, and 24 with a rate of 4.56 in 1911. There were 4 deaths from tuberculosis in 1912 and 2 in 1911, 3 from malarial fever in 1912 and 3 in 1911, 2 from pneumonia (acute lobar) in 1912 and 2 in 1911, and 7 from external causes in 1912, and 7 in 1911. There were three killed in action, two by gunshot and one by a cutting weapon. There was one death from suicide and one homicide. In 1911 there was no death in action among these troops.

TABLE No. 39.—*Causes of death among Philippine Scouts, year 1912.*

Causes of death.	Number of deaths.	Ratio per 1,000 of—	
		Mean strength.	Total deaths.
DISEASES.			
Tuberculosis (abdominal, 3; other organs, 1)	4	0.73	235.29
Malarial fever (estivo-autumnal, 2; tertian, 1)	3	.55	176.47
Pneumonia, acute lobar	2	.36	117.65
Typhoid fever	1	.18	58.82
Purulent infection	1	.18	58.82
Cancer	1	.18	58.82
Cerebral hemorrhage	1	.18	58.82
Ascaris lumbricoids	1	.18	58.82
Cholecystitis	1	.18	58.82
Chronic parenchymatous nephritis	1	.18	58.82
Sudden death, cause unknown	1	.18	58.82
Total	17	3.09	1,000.00
EXTERNAL CAUSES.			
Gunshot wounds (in action, 2; homicidal, 1)	3	.55	428.57
Punctured wounds (suicidal, 1; not given, 1)	2	.36	285.71
Incised wounds (in action)	1	.18	142.86
Acute poisoning (accidentally drinking hard oil containing a large amount of turpentine, in mistake for castor oil)	1	.18	142.86
Total	7	1.27	1,000.00
Total disease	17	3.09	708.33
Total external causes	7	1.27	291.67
Grand total	24	4.37	1,000.00

SPECIAL DISEASES, PHILIPPINE SCOUTS.

TYPHOID FEVER.

Three cases of this disease occurred among the native troops, with one death. On page 52 will be found a table giving the date and place of occurrence. One of the cases in question had been immunized. This case recovered.

MALARIAL FEVERS.

The admission rate for all fevers of this class was 241.91, as compared with 242.12 in 1911. The cause that lessens the venereal rate among the native troops operates in like manner to increase the malarial rate. The majority of them, being married men, sleep to a greater or less extent outside of the barracks, and hence without the protection of mosquito nets.

VENEREAL DISEASES.

This class of disease constitutes the second cause of admission among these troops. The noneffective rate was 3.75 per 1,000, and admission rate 55.67 per 1,000, as compared with 3.63 and 58.11 for 1911. There were 225 admissions for gonorrhea, 48 for chancroids, and 28 for syphilis in 1912, as compared with 243, 35, and 28, respectively, in 1911. These diseases caused about one-eleventh of the total number of admissions for disease, while among the American troops in the Philippines they caused about one-fourth of the total number of admissions for disease. The good showing of the native is, to a large extent, due to the fact that a large percentage of them are married.

SMALLPOX.

There were 2 cases of this disease without a death or discharge. In 1911 there were 11 cases without a death or discharge.

CHOLERA.

No case of this disease occurred during the year.

TUBERCULOSIS.

There were 32 cases of this disease, the admission rate being 5.92 per 1,000. There were 4 deaths and 23 discharges.

DYSENTERIES.

The admission rate was 7.03, as compared with 7.79 for 1911 and 10.01 for 1910. There were 38 cases, 24 of them being entamebic.

DENGUE.

The admission rate was 23.12 and noneffective rate 0.33 per 1,000, as compared with 15.38 and 0.31 in 1911.

DIARRHEA AND ENTERITIS.

The admission rate was 18.86, as compared with 20.89 for 1911.

ALCOHOLISM AND RESULTS.

For the native troops the admission rate was 0.37 and the noneffective rate was 0.003 per 1,000. There were two admissions.

BERIBERI.

In the report of 1910 and 1911 it was pointed out that this disease had practically disappeared from among the native troops, as a result of the change in diet, following the recommendation of the tropical board. Only 2 cases occurred in 1912. The admission, noneffective, death, and discharge rates for 1912 were, respectively 0.37, 0.05, 0.00, 0.00, as compared with 0.57, 0.12, 0.19 and 0.00 per 1,000 in 1911, 11.00, 1.66, 0.38 and 0.38 in 1910, and 103.93, 11.96, 2.17 and 5.96 for 1909.

UNDETERMINED FEVERS.

The admission rate for febricula and undetermined fevers was 10.36 in 1912, and 8.55 per 1,000 in 1911. The noneffective rate was 0.19 in 1912 and 0.12 in 1911.

SURGICAL OPERATIONS.

One hundred and thirty-four surgical operations were performed upon Philippine Scouts, 133 of which were successful. There was no death following operation. The anesthetic used was chloroform in 5 cases, ether in 33, chloroform and ether in 1, and local anesthetic in 61. No anesthetic was required in 34 operations.

Table No. 40.—*Surgical operations performed on Philippine Scouts, 1912.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	EYE.										
Transplantation, 1; Fuch's operation, 1.	Pterygium	2	2	....	....	....	....	....	....	2	....
	EAR.										
Mastoidotomy, curetment, and drainage.	Mastoiditis	1	1	....	....	....	....	1	....	....	....
Mastoidotomy and drainage	Mastoid abscess	1	1	....	....	....	....	1	....	....	....
Paracentesis	Otitis media	1	1	....	....	....	....	....	....	1	....
	MOUTH AND PHARYNX.										
Curetment	Adenoids, pharyngeal	1	1	....	....	....	....	....	....	1	....
	NECK AND THORAX.										
Resection of rib	Empyema	1	1	....	....	....	....	....	....	1	....
	ABDOMEN.										
Incision and drainage, 1; McBurney's operation, 1; appendectomy, 4.	Appendicitis	6	6	....	....	....	....	6	....	....	....
Bassini's operation	Inguinal hernia	1	1	....	....	....	....	1	....	....	....
	ANUS AND RECTUM.										
Curetment	Ischio-rectal abscess	1	1	....	....	....	....	....	....	1	....
Incision and drainage	Abscess of rectum	1	1	....	....	....	....	1	....	....	....
Incision and curetment, 2; excision and drainage, 2.	Fistula in ano	4	4	....	....	....	....	3	....	1	....
	GENITO-URINARY SYSTEM.										
Jaboulay's operation	Hydrocele	2	2	....	....	....	....	1	....	1	....
Incision and drainage	Abscess, periurethral	1	1	....	....	....	....	....	....	1	....
Circumcision	Redundant prepuce	2	2	....	....	....	....	....	....	2	....
Do	Phimosis	1	1	....	....	....	....	....	....	1	....
	VASCULAR SYSTEM.										
Ligation and excision	Thrombosis posterior external jugular.	1	1	....	....	....	....	....	....	1	....
Ligation	Varicose veins	1	1	....	....	....	....	1	....	....	....

TABLE No. 40.—*Surgical operations performed on Philippine Scouts, 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.				
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Local.	None.
	SKIN AND CELLULAR TISSUE.										
Incision and drainage	Abscess	37	37	....	....	....	1	1	....	15	20
Do	Cellulitis	10	9	....	1	....	....	2	....	4	4
Do	Carbuncle	1	1	....	....	....	....	....	....	....	1
Incision and curetment	Sinus	1	1	....	....	....	....	....	....	1	....
Excision, 2; Anger's operation, 3; Von Natta's operation, 1.	Ingrowing toe nail	6	6	....	....	....	....	....	....	6	....
Avulsion	Hooked nail	2	2	....	....	....	1	....	....	1	....
	LYMPHATIC GLANDS.										
Excision, 5; incision and drainage, 25.	Bubo, nature not stated	9	30	....	....	....	1	7	....	14	8
	Bubo, climatic	1									
	Adenitis, nature and location not stated.	20									
	MUSCLES, TENDONS, FASCIÆ, LIGAMENTS, AND BURSÆ.										
Incision and drainage	Myositis interstitial	1	1	....	....	....	....	....	....	....	1
Do	Bursitis	1	1	....	....	....	....	....	....	1	....
Excision	Ganglion	1	1	....	....	....	....	....	....	1	....
	BONES.										
Sequestrectomy	Osteitis 2nd phalanx, thumb.	1	1	....	....	....	....	1	....	....	....
Incision and curetment	Periostitis	1	1	....	....	....	....	....	....	1	....
	JOINTS.										
Incision and drainage	Arthritis, ankle joint, gonorrheal	2	2	....	....	....	....	2	....	....	....
	AMPUTATIONS.										
Amputation arm, lower third.	Incised wound, severe	1	1	....	....	....	1	....	....	....	....
Amputation forearm, lower third.	....do	1	1	....	....	....	1	....	1	....	....
Re-amputation, forearm, lower third.	....do	1	1	....	....	....	....	....	....	....	....
Amputation leg, lower third	Crushing of leg	1	1	....	....	....	....	1	....	....	....
Amputation finger	Gangrene, traumatic	1	1	....	....	....	....	....	....	1	....
Do	Osteoma	1	1	....	....	....	....	1	....	....	....
Amputation fourth and fifth fingers, metacarpo-phalangeal.	Gunshot wound	1	1	....	....	....	....	1	....	....	....
	TUMORS.										
Excision	Cystic tumor	1	1	....	....	....	....	....	....	1	....
Do	Fibroma	1	1	....	....	....	....	....	....	1	....
Do	Lipoma	1	1	....	....	....	....	....	....	1	....
	MISCELLANEOUS.										
Incision, through and through drainage.	Gunshot wound knee	1	1	....	....	....	....	1	....	....	....
Lumbo-inguinal drainage, extraperitoneal.	Sanguino-purulent abscess, lumbo-inguinal.	1	1	....	....	....	....	1	....	....	....
Total number of cases		134	133	....	1	....	5	33	1	61	34

INFLUENCE OF SEASON.

Excluding injuries, venereal diseases, alcoholism, and vaccinia, over which causes of admission the seasons have little or no influence, the highest admission rate was in March and the lowest in December. The highest constant noneffective rate was in March and the lowest in November. The highest rate for malarial fevers was in June; for American troops it was in April.

TABLE No. 41.—*Influence of season on Philippine Scouts, year 1912.*

Months.	Mean strength.	Ratio per 1,000 of mean strength.								Prevailing diseases (exclusive of venereal diseases, etc.).
		All causes.					Exclusive of venereal diseases, alcoholism, vaccinia, and external causes.			
		Admissions.		Deaths.	Noneffective.					
		Total.	Hospital.		Total.	Hospital.	Admissions.	Deaths.	Noneffective.	
January....	5,403	55.90	52.57	0.19	20.99	20.05	44.23	0.19	13.67	Malarial fever, 97; acute bronchitis, 15; constipation, 14; furuncles, 14.
February..	5,296	51.74	47.96	.57	21.20	20.28	39.84	.19	13.92	Malarial fever, 90; constipation, 29; acute bronchitis, 9.
March......	5,804	67.72	60.31	.17	24.30	22.75	58.06	.17	17.00	Malarial fever, 136; dengue, 40; constipation, 20; acute bronchitis, 16.
April.......	5,762	63.69	58.31	.52	22.29	21.05	55.36	.17	15.61	Malarial fever, 159; acute bronchitis, 17; constipation, 15; febricula, 14.
May........	5,678	64.11	54.95	.18	20.79	19.18	55.48	.18	15.11	Malarial fever, 156; constipation, 19; acute bronchitis, 13; diarrhea and enteritis, 12.
June.......	5,575	65.29	54.17	.72	20.42	18.67	56.86	.72	15.59	Malarial fever, 179; constipation, 30; diarrhea and enteritis, 13; furuncles, 13.
July........	5,609	56.70	50.28	.53	19.45	18.25	47.07	.53	14.18	Malarial fever, 124; constipation, 30.
August.....	4,981	59.43	53.00	.20	20.65	19.36	47.18	.20	13.11	Malarial fever, 90; constipation, 20; dengue, 11; furuncles, 10.
September.	5,368	45.46	41.54	.....	17.98	17.11	36.89	.....	12.22	Malarial fever, 77; diarrhea and enteritis, 14; dengue, 13.
October....	5,195	51.78	48.51	.58	19.12	18.08	42.93	.38	13.56	Malarial fever, 92; acute bronchitis, 20; constipation, 14; dengue, 12.
November	5,173	50.07	46.78	.39	17.63	16.95	37.70	.....	12.20	Malarial fever, 62; dengue, 15; constipation, 15; acute bronchitis, 14.
December..	5,044	43.02	39.45	.40	18.27	17.82	35.09	.40	13.07	Malarial fever, 46; acute bronchitis, 14; constipation, 11.
Total.	5,407	678.20	610.32	4.37	20.32	19.18	560.39	.09	14.16	Malarial fever, 1,308; acute bronchitis, 118; constipation, 215.

PREVALENCE OF DISEASES, BY RACES, IN THE PHILIPPINES.

In making this comparison it is to be borne in mind that the native troops were serving in their own country under conditions natural to them, but inimical to American troops.

The admissions and constant noneffective rates were much lower for the Philippine than for American troops serving in the Philippines. The admission rate for American troops being 1,246.99 and for the Philippine 678.20, while the noneffective rate for the American troops was 44.74 and for Philippine 20.32. The death and discharge rates for the Philippine troops were also lower than for American, the death rate for the former being 4.37, and for the latter 5.42, while the discharge rate for the former was 8.19 and the latter 9.63.

The noneffective, admission, and death rates were all higher for the colored troops serving in the Philippine Islands than for the white, being for the colored 48.10, 1,715.77, and 7.40 per 1,000 and for the white 44.32, 1,189.44, and 5.18 per 1,000. The discharge rate for the white troops was 10.18 per 1,000 and for the colored 5.18.

TABLE No. 42.—*Important diseases, by races, Philippine Islands, year 1912.*

Diseases.	Admission rates.			Diseases.	Admission rates.		
	White troops.	Colored troops.	Philippine Scouts.		White troops.	Colored troops.	Philippine Scouts.
Venereal diseases	215.43	524.06	55.67	Hemorrhoids	7.45	19.24	0.37
Malaria	186.35	45.89	241.91	Appendicitis	5.82	4.44	1.66
Dengue	101.67	168.02	23.12	Articular rheumatism, acute and chronic	5.63	13.32	4.81
Diarrhea and enteritis	57.97	82.90	18.86	Conjunctivitis	4.63	8.14	8.69
Furunculosis	34.44	45.15	20.90	Tuberculosis	4.36	10.36	5.92
Tonsilitis (all)	23.90	37.01	3.51	Influenza	2.18	12.58	.37
Alcoholism	22.17	13.32	.37	Intestinal parasites	2.00	1.48	6.47
Bronchitis, acute and chronic	18.54	48.11	28.30	Pneumonia	1.18	3.70	1.85
Dysentery	18.08	7.40	7.03	Typhoid fever	.45	....	.56
Muscular rheumatism	15.08	55.51	5.92	Beriberi	....	....	.37
Trichophytosis	8.00	24.43	8.32				

SANITATION IN THE PHILIPPINE ISLANDS.

The chief surgeon reports that the sanitary condition of the different posts and the accommodation provided for the troops were generally reported to be satisfactory and no outbreak of disease was attributed to unsanitary conditions. As in 1911, however, there was a certain amount of sickness resulting from field service. As has been noted under "typhoid fever," five men from Camp Keithley, Mindanao, were infected with typhoid fever while on duty in the field. At several posts it was noted by the surgeons that a number of men contracted malarial infections while in the field. The troops in the Island of Mindanao around Camp Keithley and on the Island of Jolo were in the field a part of the year operating against hostile Moros.

PROXIMITY OF NATIVE TOWNS.

As has been noted before, the proximity of native towns to military posts to a certain extent nullify the sanitary measures instituted in the post. The surgeon, Camp McGrath, says:

> If this post is to be occupied for any length of time it would seem a sanitary necessity for the Government to rent the land immediately behind the officers quarters, the barrios of Viga and Sambat, for to leave these native barrios so close to the post nullifies much of our own sanitation. I am inclined to believe that three cases of entro-colitis, with one death, in officers families, last September were due to infection from these barrios.

> On account of the close proximity of the town of Batangas with 30,000 native inhabitants, and the barrios of Viga and Sambat 100 yards behind the officers quarters and off the reservation, the question of venereal disease at this post presents many difficulties.
>
> Dengue is endemic in Batangas and the barrios immediately adjoining the post and every new batch of troops furnish new material for infection.
>
> We do the best we can to make the people living in them keep their premises clean by frequent inspections and threats; but as a matter of fact, we have no authority in the barrios, nor do the municipal laws, as I understand them, cover the cases sufficiently in a sanitary way. The natives maintain horses, cattle, and pigs immediately around their homes and use open trenches for their own dejecta, conditions allowed by municipal laws; and on account of their poverty must necessarily be allowed. Nevertheless these conditions, so close to our own premises, nullify to a great extent our own sanitary measures.

The surgeon, Pettit Barracks, in speaking of antimalarial measures, says:

> Unfortunately we are in juxtaposition with many native shacks and other breeding places of mosquitoes.

At Augur Barracks the surgeon comments as follows on the antiplague measures adopted:

> By the use of rat poison and traps and construction of cement floors in all business houses in Jolo and its barrios, the number of rats has been greatly decreased. All ships lying at the dock are required to keep rat guards on all mooring lines and a watchman on the gangway.

It is apparent that these native barrios cause a great deal of sickness in posts and are a great source of danger where epidemics of severe infectious diseases, such as cholera or plague, occur. It is certainly desirable to build all posts away from the vicinity of native barrios.

ANTIMALARIAL MEASURES.

Antimalarial measures are being carried on throughout the islands. The measures are practically the same as those mentioned heretofore, that is, drainage and oiling of pools with other general measures for the prevention or destruction of mosquitos; the enforced use of mosquito nets; and in some cases the use of prophylatic doses of quinine. All infected cases are carefully treated and kept under observation until considered cured. In some few instances efforts are being made to screen the barracks and quarters.

FOOD SUPPLY.

Several epidemics of food poisoning occurred at different posts. These outbreaks were probably due to some bacterial infection of the food, although the specific organism was in no case isolated.

The surgeon at Augur Barracks, in speaking of the prevalence of amebic dysentery, says:

> Most of the cases of dysentery have yielded to the ipecac treatment, but there have been several cases which have recurred several times. Two liver abscesses, only, were found; both were operated on and improvement has been steady in both cases since the operation. The source of dysentery has not been determined, though everything bearing on the subject has been investigated as far as possible.
>
> All the water is distilled; the public places, such as restaurants, saloons, soda fountains, etc., are using boiled water and proper care in washing the glasses. All troop messes are using only cooked vegetables, though earlier in the year some radishes and lettuce were eaten raw, and these, possibly, were a contributing cause. Their use has been stopped.

The surgeon at Fort William McKinley says:

> The old type of ice box, long in use in the Islands, was so unsatisfactory, that new refrigerators of suitable size and design were supplied to all organizations during the latter part of the year.

DISPOSAL OF WASTES.

At all except a few of the posts the system is the same as outlined in the last two reports of this office. At Fort Mills the surgeon states that:

> Owing to large number of temporary structures and incomplete sewer system the disposal of wastes is accomplished partly by rock pile incinerators, partly by dry earth closets, and partly by sewer. The work of the incinerators has proven very satisfactory with one exception.

An Imhoff tank, which has been built at Camp Stotsenburg, is reported to be working satisfactorily.

BARRACKS AND QUARTERS.

The new concrete barracks and quarters which have been built at a few posts are, on the whole, quite satisfactory. There are a few minor errors to be corrected.

CLOTHING.

The surgeon at Augur Barracks remarks:

> Little complaint is heard as to clothing, aside from that already reported from numerous sources, viz, poor quality of issue clothing, heavy weight, shrinking, bad fit, etc., except as to constant use of leggins by enlisted men. In my opinion many skin lesions of the leg are due to the constant wearing of the leggins.

He seems to voice the sentiment of the entire Medical Corps on this question of the leggins.

ALASKA.

The mean enlisted strength of the troops serving in Alaska during the past year was 1,197 as compared with 1,119 in 1911. This force consisted of Infantry, Signal Corps, and Hospital Corps, all white. Alaska still maintains its position as being by far the healthiest region where the Army is stationed. The noneffective, admission, and discharge rates were all higher in 1912 than in 1911. The death rate was somewhat lower.

The noneffective rate was 16.24 per 1,000 in 1912 as compared with 13.15 in 1911. The rate for disease was 10.96 and for external causes, 5.28 per 1,000. The total rate in the United States was 27.15 per 1,000; that for disease being 22.57, and that for external causes 4.58 per 1,000. The diseases causing the highest noneffective rates were: Venereal diseases, 2.59 per 1,000; measles, 1.07; alcoholism, 0.57; mumps, 0.38, and tuberculosis (all), 0.38.

The admission rate for all causes was 511.28 per 1,000 in 1912 as compared with 418.23 in 1911. The rate for disease was 355.89 per 1,000, and that for external causes 155.39. The corresponding rates for the United States were for total causes 738.70 per 1,000, that for disease being 596.94, and that for external causes 141.76. The diseases having the highest admission rates were: Venereal diseases 41.77; alcoholism, 30.07; measles, 21.72, and bronchitis, 14.20 per 1,000. The rate for discharge on certificates of disability in 1912 was 5.01, and in 1911 4.47. All of the discharges in 1912 were for disease. The corresponding rate in the United States was 14.48 per 1,000, 13.19 being for disease, and 1.29 for external causes.

The death rate in 1912 was 5.85 per 1,000, and in 1911 it was 6.26. In actual number, 7 deaths occurred from disease and three from external causes.

Tables Nos. 3 and 73 on pages 32 and 260, give all the figures for the troops in Alaska for the year 1912.

Sixteen men were invalided home. Five were for tuberculosis. The other 11 were each for a separate cause.

TABLE NO. 43.—*Influence of station, year 1912, Alaska, on officers and enlisted men.*

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on surgeon's certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Excluding injuries, venereal diseases, alcoholism, and vaccinia.	Total	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Fort William H. Seward	362	574.59	317.68	....	....	5.52	5.52	5.52	5.52	18.94	16.30	8.60	7.92	6.93	12.06	3.15	9.90
Fort Gibbon	297	461.28	259.26	10.45	10.45	6.73	3.37	17.18	13.82	13.17	11.84	6.55	5.99	4.82	10.45	2.40	9.25
Fort Liscum	200	470.00	290.00	10.58	....	5.00	....	15.58	....	18.10	15.16	10.31	9.28	6.63	14.10	3.78	13.02
Fort St. Michael	167	431.14	221.56	6.29	6.29	5.99	5.99	12.28	12.28	17.62	15.82	7.77	7.05	6.45	14.96	2.84	12.84
Fort Davis	158	645.57	329.11	....	....	6.33	....	6.33	....	13.11	11.10	5.79	4.87	4.80	7.43	2.12	6.44
Fort Fairbanks	62	64.52	48.39	....	....	....	....	....	....	1.72	1.63	.40	.31	.63	9.75	.15	3.00
Field, etc	5	1,400.00	1,200.00	....	....	....	....	....	....	13.66	10.93	13.11	10.38	5.00	3.57	4.80	4.00
Total officers and enlisted men	1,251	498.80	278.18	5.01	3.34	5.60	3.20	10.61	6.54	15.65	13.59	7.53	6.81	5.73	11.48	2.76	9.91
Total enlisted men	1,197	511.28	284.04	5.01	3.34	5.85	3.34	10.86	6.68	16.24	14.20	7.80	7.11	5.94	11.62	2.86	10.06

HAWAII.

Only one island of the Hawaiian group is garrisoned, namely, Oahu, on which is situated the city of Honolulu. The mean enlisted strength of the garrison during the year was 3,376 as compared with 2,014 in 1911. In spite of its salubrious and temperate climate and the absence of the more serious epidemic diseases, the noneffective, admission and discharge rates were higher than for the United States. The average number of days' treatment for each case was 13.08 days, as compared with 13.45 for the United States. The death rate was lower.

The constantly noneffective rate was 33.44 per 1,000 in 1912 as compared with 44.52 for 1911. The rate for disease was 26.57, and that for external causes, 6.88 per 1,000, as compared with 36.18 for disease and 8.34 for injuries in 1911. The diseases causing the highest noneffective rates were: Venereal disease 8.69, appendicitis 0.65, influenza 0.62, and diarrhea and enteritis 0.60.

The admission rate in 1912 was 936.32 per 1,000 as compared with 1,080.44 for 1911. The rate for disease in 1912 was 680.69 per 1,000 and for external causes 255.63. That for disease in 1911 was 808.84 and for external causes 271.60. Some of the principal diseases causing the highest admission rates were: Venereal disease 122.93 per 1,000, diarrhea and enteritis 44.14, influenza 38.51, and bronchitis 22.51. A little less than one-third of the total nonefficiency for diseases and a little less than one-fifth of the total number of admissions were caused by venereal diseases.

The rate for discharge for disability was 18.07 per 1,000, 16.29 being for disease and 1.78 for external causes. In 1911 the total rate was 13.90, that for disease being 13.41 and that for external causes being 0.50 per 1,000.

The death rate was 3.85 per 1,000 as compared with 2.98 in 1911. In actual numbers, 13 deaths occurred, 10 being due to external causes and 3 to disease. Three of the deaths from external causes were due to drowning and 3 to traumatisms by machines. Not more than 1 death occurred from any other one cause. In 1912 there were 78 enlisted men invalided home from the Hawaiian Islands. The diseases or conditions causing the highest number of men to be invalided home were: Mental alienation 12, venereal diseases 11, flat foot 7, tuberculosis 6, and enuresis 5.

Tables Nos. 3 and 73, on pages 32 and 260, give figures for troops serving in Hawaii.

TABLE No. 44.—*Influence of station, year 1912, Hawaii, on officers and enlisted men.*

	Mean strength.	Ratio per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharged on certificate of disability.		Deaths.		Total losses.		Noneffective rates.				From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.	
										From all causes.		Excluding injuries, venereal diseases, alcoholism, and vaccinia.					
		From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	From all causes.	Exclusive of injuries, venereal diseases, alcoholism, and vaccinia.	Total	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
Schofield Barracks........	2,773	984.85	580.24	17.09	12.53	4.69	0.72	21.78	13.25	22.96	18.71	11.33	9.57	8.40	8.54	4.15	7.15
Fort Shafter..............	372	857.53	438.17	30.98	28.17	2.69	2.69	33.67	30.86	135.04	131.53	79.20	78.41	49.42	57.64	28.99	66.15
Fort Ruger................	236	402.54	237.29	8.85	4.42	4.24	....	13.09	4.24	2.37	.64	1.10	.37	.87	2.14	.40	1.70
Fort De Russey	168	601.19	380.95	18.52	12.35	....	....	18.52	12.35	6.20	3.32	2.94	1.90	2.27	3.77	1.08	2.83
Total officers and enlisted men	3,549	914.62	533.11	18.07	13.63	4.23	1.13	22.30	14.76	32.54	28.61	17.37	15.81	11.91	13.02	6.36	11.92
Total enlisted men.......	3,376	936.82	542.36	18.07	13.63	3.85	.59	21.92	14.22	33.44	30.01	17.76	16.57	12.24	13.08	6.50	11.98

CHINA.

The mean enlisted strength of the troops, enlisted men, serving in China during 1912 was 1,097. This force consisted of Infantry, and detachments of Signal Corps, Hospital Corps, and noncommissioned staff, all white.

The noneffective rate was 26.01 per 1,000 for all causes, the rate for disease being 23.60, and that for external causes 2.41. The diseases causing the highest noneffective rates were venereal diseases 13.55 per 1,000, rheumatism, articular (all), 0.66, pneumonia (lobar) 0.57, and influenza 0.54.

The admission rate for all causes was 697.36, that for disease being 596.18 and that for external causes 101.19. The diseases causing the highest admission rates were venereal 203.28 per 1,000, influenza 42.84, diarrhea and enteritis 33.73, and alcoholism 22.79.

The discharge rate was 5.47 for all causes. The discharges were all for disease. The death rate was 7.29 per 1,000, the rate for disease being 3.65 and that for external causes being also 3.65.

Tables Nos. 3 and 73, on pages 32 and 260, give all the figures for the troops in China for the year 1912.

recommendation of the post surgeon, daily examinations were made of all the enlisted men in the post for several weeks. This resulted in 74 men being admitted to the hospital for several days observation in June, 10 in July, and 5 in August. In Table No. 76 seventy-seven of these cases are tabulated as under observation, and 12 as hypertrophied inguinal glands. If these 89 cases are deducted from the admission rate for disease, as they should be, this rate would be reduced by 151.36 per 1,000, making it 886.05, or lower than the corresponding rate in 1911. The total rate would then be 991.50 per 1,000, as compared with 1,050.00 for 1911.

The following list shows the principal diseases, with rates for 1911 and 1912:

	1911	1912
Venereal diseases	191.38	105.44
Malarial fevers	131.03	52.72
Dysenteries	18.97	34.01
Diarrhea and enteritis	12.07	112.24
Rheumatism, articular (all)	3.45	11.90
Febricula and undetermined fevers	1.72	13.61

It will thus be seen that the rate for venereal diseases showed a very marked improvement. The improvement in the rate for malarial fevers was also marked.

TABLE No. 46.—*Diseases of native Porto Rican troops, admission rates per 1,000 of mean strength.*

	1912	1911	1910	1909	1908
Venereal diseases	105.44	191.38	162.44	250.44	242.91
Chancroid and results	57.82	101.72	55.84	89.95	60.28
Gonorrhea and results	30.61	60.34	74.45	126.98	143.62
Syphilis and results	17.01	29.31	32.15	33.51	39.01
Furuncle	66.33	44.83	57.53	109.35	78.01
Malaria	52.72	131.03	74.45	179.89	219.86
Dysenteria	34.01	18.97	22.00	14.11	15.96
Influenza	13.60	46.55	23.69	82.89	83.33
Rheumatism, acute articular	11.90	3.45	1.69	8.82	5.32
Bronchitis, acute and chronic	10.20	15.52	20.30	29.98	19.50
Tuberculosis	3.40	1.72	1.69	3.53	1.77
Filariasis	1.70	20.69	28.76	22.93	3.55
Smallpox	1.70	6.90	1.69	3.53	7.09
Typhoid fever	....	1.72	5.08	5.29	5.32
Ankylostomiasis	....	96.55	76.14	8.82	14.18
Measles	....	....	1.69	17.64	19.50

The rate for discharge for disability was 6.80 per 1,000, all cases being for disease. In 1911 the rate was 8.62 per 1,000, that for disease being 6.90 per 1,000, and for external causes 1.72. The death rate was 3.40 per 1,000. The actual number of deaths were 2. Both were due to external causes, traumatic in character. In 1911 there were 2 deaths caused by disease and 2 by external causes.

The principal point of sanitary interest during the year was the occurrence of bubonic plague in San Juan and some other points in Porto Rico during the summer of 1912. Prompt and efficient measures were adopted to protect the garrison at San Juan and no case occurred. Mention of the work done by Lieut. Col. J. R. Kean, Maj. F. F. Russell, and First Lieut. F. H. Foucar, Medical Corps, during the early part of this epidemic, is made under the heading of "Special work by medical officers," page 177.

PORTO RICO.

There are in Porto Rico two military posts—San Juan at the capital, and Henry Barracks in the interior—both garrisoned by the Porto Rican Regiment. The mean enlisted strength for 1912 was 588. The enlisted strength of this regiment is recruited from native Porto Ricans, the officers being in part Americans and in part Porto Ricans.

TABLE No. 45.—*Movement of sick in Porto Rico, years 1912 and 1911—Native troops.*

	Years.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		Total.	In hospital.	Total.	In hospital.
Ratios per 1,000 of mean strength:					
Admissions to sick report	1912	1,142.86	977.89	921.77	....
	1911	1,050.00	987.93	770.69	....
Discharges on certificate of disability	1912	6.80	....	5.10	....
	1911	8.62	....	6.90	....
Deaths	1912	3.40	....	....	....
	1911	6.90	....	3.45	....
Total losses	1912	10.20	....	5.10	....
	1911	15.52	....	10.35	....
Noneffective	1912	17.47	15.94	10.15	8.99
	1911	29.78	28.55	16.58	15.90
Average number of days lost:					
For each soldier	1912	10.28	9.37	5.97	5.28
	1911	10.87	10.42	6.05	5.80
For each case	1912	8.99	9.59	6.47	....
	1911	10.35	10.55	7.85	....

The noneffective rate was much lower in 1912 than in 1911, it being 17.47 per 1,000 in 1912, as compared with 29.78 in 1911. The rate for disease in 1912 was 16.32, and for external causes 1.15. In 1911 the corresponding rates were 28.15 and 1.63. Some of the principal diseases, with noneffective rates, were as follows:

	1911	1912
Venereal diseases	11.47	5.96
Intestinal parasites	2.03	.75
Malarial fevers	1.97	.50
Diarrhea and enteritis	.18	.77
Dysenteries	.44	.64

It is thus apparent that the greatest improvement, and the one accounting for the most of the improvement in the general rate was in the rate for venereal diseases. Both the intestinal parasites and malarial fevers also showed a marked improvement.

The admission rate was higher in 1912 than in 1911, being 1,142.86 per 1,000, as compared with 1,050.00 for 1911. The rate for disease was 1,037.41 per 1,000, and that for external causes 105.44 in 1912, and in 1911 the rate for disease was 968.97 and for external causes 81.03. In June, when the bubonic plague was reported in San Juan, upon the recommendation of the post surgeon, daily examinations were made of all the enlisted men in the post for several weeks. This resulted in 74 men being admitted to the hospital for several days observation in June, 10 in July, and 5 in August. In Table No. 76 seventy-seven of these cases are tabulated as under observation, and 12 as hypertrophied inguinal glands. If these 89 cases are deducted from the admission rate for disease, as they should be, this rate would be reduced by 151.36 per 1,000, making it 886.05, or lower than the corresponding rate in 1911. The total rate would then be 991.50 per 1,000, as compared with 1,050.00 for 1911.

The following list shows the principal diseases, with rates for 1911 and 1912:

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Diarrhea and enteritis	12.07	112.24
Rheumatism, articular (all)	3.45	11.90
Febricula and undetermined fevers	1.72	13.61

It will thus be seen that the rate for venereal diseases showed a very marked improvement. The improvement in the rate for malarial fevers was also marked.

TABLE No. 46.—*Diseases of native Porto Rican troops, admission rates per 1,000 of mean strength.*

	1912	1911	1910	1909	1908
Venereal diseases	105.44	191.38	162.44	250.44	242.91
Chancroid and results	57.82	101.72	55.84	89.95	60.28
Gonorrhea and results	30.61	60.34	74.45	126.98	143.62
Syphilis and results	17.01	29.31	32.15	33.51	39.01
Furuncle	66.33	44.83	57.53	109.35	78.01
Malaria	52.72	131.03	74.45	179.89	219.86
Dysenteria	34.01	18.97	22.00	14.11	15.96
Influenza	13.60	46.55	23.69	82.89	83.33
Rheumatism, acute articular	11.90	3.45	1.69	8.82	5.82
Bronchitis, acute and chronic	10.20	15.52	20.30	29.98	19.50
Tuberculosis	3.40	1.72	1.69	3.53	1.77
Filariasis	1.70	20.69	28.76	22.93	3.55
Smallpox	1.70	6.90	1.69	3.53	7.09
Typhoid fever	....	1.72	5.08	5.29	5.32
Ankylostomiasis	....	96.55	76.14	8.82	14.18
Measles	....	....	1.69	17.64	19.50

The rate for discharge for disability was 6.80 per 1,000, all cases being for disease. In 1911 the rate was 8.62 per 1,000, that for disease being 6.90 per 1,000, and for external causes 1.72. The death rate was 3.40 per 1,000. The actual number of deaths were 2. Both were due to external causes, traumatic in character. In 1911 there were 2 deaths caused by disease and 2 by external causes.

The principal point of sanitary interest during the year was the occurrence of bubonic plague in San Juan and some other points in Porto Rico during the summer of 1912. Prompt and efficient measures were adopted to protect the garrison at San Juan and no case occurred. Mention of the work done by Lieut. Col. J. R. Kean, Maj. F. F. Russell, and First Lieut. F. H. Foucar, Medical Corps, during the early part of this epidemic, is made under the heading of "Special work by medical officers," page 177.

BOARD FOR THE STUDY OF TROPICAL DISEASES.

During the year 1912 this board was composed of Maj. Percy M. Ashburn, Capt. E. B. Vedder, and Lieut. Ernest R. Gentry. Maj. Weston P. Chamberlain and Maj. Horace D. Bloombergh were relieved by Maj. Ashburn and Lieut. Gentry in January, 1912.

A second story was built over a portion of the quarters of the Hospital Corps detachment for the occupancy and use of the board. This work was completed about August 31, 1912. The board is thus provided with far better and more commodious quarters.

EFFECTS OF TROPICAL SERVICE.

In reply to a letter from the commanding general of the Department of the Philippines, March 15, 1912, asking for the opinion of the board in regard to the effects of continued tropical service, and relative to the character of residence best suited to conserve the health of the occupant, the board stated—

1. The effects of a tropical climate, if harmful, are probably cumulative to a certain extent, i. e., increase with length of exposure.
2. Aron (Phil. Journ. of Science, April, 1911) has shown that tropical sunlight is harmful by virtue of its heat rays; monkeys and rabbits, for instance, being killed by exposure to sun for an hour or two, even in December and January, but being protected from harm by either shade or an electric fan or breeze to promote heat dissipation.
3. Aron and many others show, in fact there is practical unanimity in the opinion, that humidity greatly increases and aggravates the harmful effects of heat by decreasing evaporation.
4. The climate of the Philippines is both hot and humid and is considered by most Americans a cause of discomfort.
5. Hot and muggy weather in the United States and most parts of the world is recognized as a proper justification for lessening or stopping work—witness the general closing of schools in summer, the general taking of vacations then, the earlier closing of stores, etc.
6. It is there and elsewhere a matter of common observation that "heat waves" do increasing harm as they last longer; that they are tolerable if a breeze comes up daily (as at the seashore) or if the nights are cool. Mortality rates increase progressively during such periods of excessive heat.
7. It is a matter of official recognition that Government employees need to get away from the heat of Manila each year; hence the removal to Baguio.
8. It is likewise commonly recognized that many women and children become so run down and debilitated as to need to go to Japan, Baguio, or the United States.
9. It is often true that monotony and discomfort are the causes of nervous and mental breakdown—witness the often-mentioned insanity among farmers' wives and the nervous breakdowns attributable to

pain and strain, even though it be, as in many cases of eyestrain, so slight as not to be recognized by the patient.

The board concludes that—

> It becomes apparent that an endeavor should be made to provide quarters as cool as possible. The health of officers and men will undoubtedly suffer if they are compelled to live in hot quarters.
>
> The ideal of the majority of tropical sanitarians with regard to housing is a detached house of the bungalow type, having wide verandas, and with all the rooms communicating with the outside. Giles says: "The second great desideratum of a tropical house is free ventilation, to secure which at least one, and preferably two sides of each room should be in free communication with the outer air by means of doors or windows and some of these extend to the floor level or near it."
>
> This arrangement secures protection from the heat and the best possible ventilation, and it is evident that it is desirable to approach this ideal as closely as possible, while types of construction in which part of the rooms will be hot and illy ventilated should be condemned. In quarters so constructed the resultant discomfort and injury will vary with the increased heat. A man can remain in the Tropics indefinitely without being actually sick if infectious diseases are avoided.
>
> This is fast leading to the fallacy that we can advantageously remain many years in these latitudes. The fact that while a man may never be sick he yet may have his physical and mental vigor greatly impaired by prolonged exposure to heat is thus lost sight of. No man can do his best work, either physical or mental, if he is hot and uncomfortable. The same feeling of lassitude and indisposition to exertion is experienced at home during the hot summer, which after a few years becomes chronic.
>
> If troops are to remain in this climate, it will be desirable that they should live under the most favorable circumstances, and especially that they should have cool quarters. It is believed to be a fact that if the Army is hot and uncomfortable in the Tropics the end results may be inferior even from a financial standpoint. Sick leave and ordinary leave will increase and general efficiency will be impaired.

MOUNTAIN DIARRHEA.

In accordance with the direction of the commanding officer, Philippine Department, of April 20, 1912, the board made an examination and report on the sanitary conditions of Camp John Hay, Benguet, Philippine Islands. An examination of the sick report for 1910, 1911, and the first part of 1912 showed that the only disease that could be said to be at all prevalent was an acute intestinal trouble, usually referred to as "mountain diarrhea." This disease is characterized by diarrhea, with mucus and blood in the stools, and by slight fever. It is usually mild in soldiers and lasts from two days to a week. A small epidemic of this disease occurred during the early part of the year.

> On January 17, 1912, Private H., of Company E, was taken sick with diarrhea, fever, and abdominal pain. He went to hospital on the 19th and returned to duty on the 20th. On the 22d he was put on kitchen police, where of course he associated with the cook. On February 1, 10 days later, Cook J. had diarrhea and fever and passed blood and mucus in his stools. He did not go on sick report. From February 9 to 16 9 other men of Company E, all of whom ate in the company and partook of the food prepared by J., developed the same trouble, diarrhea, with bloody, mucus stools and fever. One of these men, Private W., was on kitchen police while suffering from his diarrhea. Other cases may have developed later in February, but if so they were so mild that the men did not go on sick report, for the next admission to hospital for this trouble was that of Private A., on March 6, and the next that of Private F., who began to mess with E Company on March 1, was taken sick with fever and bloody mucus stools on March 12 and entered hospital on March 21.
>
> We have an epidemic of disease characterized by fever, abdominal pain, diarrhea, and blood and mucus in the stools, limited to the men of one company and one mess. All of the cases were very mild and the average duration of them was six days. Despite their mildness and brief duration, it seemed certain that the disease was infectious, that the infection was disseminated in the company and through food, and probably that it was bacillary dysentery.

The only promising method of investigation as to the specific nature of the trouble several months after the epidemic was to test the agglutinating power of the blood on dysentery bacilli.[1] For this purpose we had two strains, Flexner and Shiga, and using them we obtained positive agglutinations of the Flexner bacillus with the blood of all cases in dilution of 1 to 20, and with the blood of all but three in dilutions of 1 to 50. Control tests made with the blood of five men who had not had diarrhea gave negative results in four instances and a positive in 1 to 20 dilution in one instance.

During the study by the board in April and May there were two cases. From one of these cases the bacilli of bacillary dysentery of the Flexner type were isolated. From a study of the epidemiology of the disease and its prevalence in natives, from its analogy to similar diseases in other parts of the world, from the proved presence of bacillary dysentery in Baguio, as shown by the work of Dr. Barker, of the Bureau of Science, and from the study of the epidemic referred to above, the board concluded that the "mountain diarrhea" is bacillary dysentery, usually mild, but occasionally fatal. It is apt to be severe in children and is often or usually due to infection with the Flexner type of bacillus.

SMALLPOX AND VACCINIA.

Some work has been undertaken bearing on the relationship of smallpox and vaccinia. The board states that—

Apparently that relationship presents a dilemma and an effort at explanation involves the choice of one of the alternatives. It would appear either:

1. That the germ of smallpox by passage through bovines and some other animals loses those qualities by virtue of which it causes a generalized, highly contagious disease of large mortality, and is only able thereafter to cause a localized, harmless, inoculable, and noncontagious disease, that it never regains its former qualities by years or a century of passages through its original and proper host, and that it therefore presents the most striking instance of hereditary transmission of acquired characteristics (though we have not seen it cited as such); or
2. That smallpox is caused by a double virus, one part of which can not long survive in bovines (four generations) while the other survives and becomes exalted, constituting vaccine. Vaccine inoculated into human beings protects against smallpox by inducing immunity to one of the two essential parts of its causative virus.

A great deal of difficulty was experienced in finding cases of smallpox in Manila from which material could be obtained to conduct experiments. Both the director of health and the physician in charge of San Lazaro Hospital had several times spoken to the board of a disease resembling varioloid that appears in Manila with a certain amount of regularity during each hot season, and had expressed their uncertainty as to its nature. As a precautionary public-health measure these cases have been classified as modified smallpox and isolated as such. The board, being particularly anxious to obtain access to cases of smallpox for the purpose of making experimental inoculations in monkeys, saw a number of these cases, all of which have shown great similarity. The records show that there have been lately about 500 cases of "varioloid" in Manila per year, and that there has been no mortality due to the disease. Attempts to infect seven monkeys by inoculation with fresh vesicle contents were uniformly unsuccessful. Had the disease been smallpox most of the monkeys should have shown successful inoculations. The board is of the opinion that the disease in question is not smallpox or varioloid, and that it is in all probability chicken pox and that smallpox except for an occasional imported case is nonexistent in Manila. If this opinion is correct, the facts signify a notable achievement in preventive medicine and it is unfortunate that the records do not show it. Some experiments were conducted with material obtained from two imported cases of smallpox. The following is a summary of the results:

---

[1] This test depends on the observed fact that the blood serum of persons recovering from one of certain infectious diseases, such as bacillary dysentery or typhoid, will, if diluted and added to suspensions or cultures of the specific germs causing the disease, cause them to come together in clumps. The blood of persons who have not had the disease rarely does so.

1. Fresh vesicle contents from a case of human variola is capable when inoculated into abrasions or scarifications on nonvaccinated monkeys, of producing *variola inoculata* in those monkeys, the disease being marked by fever and by primary and secondary lesions.

2. Such vesicle contents kept at ice-chest temperature for 23 days loses most of its virulence, but may still, in a proportion of instances, produce a mild and atypical *variola inoculata*, which in turn and in further modified form may be passed to other monkeys.

3. Active and fresh vesicle contents inoculated on vaccinated monkeys may produce a fever closely resembling that of *variola inoculata* in the monkey and a condition permitting of interpretation as *variola sine exanthemate* in the monkey.

4. Smallpox scabs or disks from man or monkey possess but a low degree of virulence, or very quickly lose their virulence.

5. When inoculation of such scabs does result in the production of infection this may be manifested only locally at the site of inoculation. In other words the "B" part of smallpox virus survives longest in scabs.

We admit that this small series of experiments affords but little proof of the correctness of our hypothesis as to the relationship of variola and vaccinia. We feel justified in restating our hypothesis that smallpox is due to a dual and divisible virus, one part of which is the cause of vaccinia and the pock stage of smallpox, the other part being the necessary for the production of the highly contagious, febrile, general disease with an initial stage and preliminary rashes.

HEMOGLOBINURIC FEVER.

On examining the blood of a case of hemoglobinuric fever a number of spirilli, resembling the spirochætæ of relapsing fever were found. The blood of several other patients with this disease has been examined and all found negative for spirilli.

The board is of the opinion that there are four possibilities.

1 (least probable). That the occurrence of the spirillum in this blood is without significance or is a contamination.

2. That it has a relationship to black-water fever.

3. That it causes a hitherto unknown variety of relapsing fever.

4 (most probable). That the case was one of Indian relapsing fever, a disease not hitherto recognized or reported in these islands so far as is known.

BERIBERI AND POLYNEURITIS.

Capt. Vedder has continued his work on these subjects and summarizes the later results as follows:

> The work on beriberi has been continued, and some important results have been obtained. We have found that undermilled rice that has been stored for more than a year, and which was moldy and quite unfit for human consumption, would still prevent fowls from developing polyneuritis gallinarum. This experiment shows conclusively that an undermilled rice does not necessarily lose its protective power because of dampness or long storage, as has been claimed by some.
>
> We have succeeded in confirming Funk's (2) discovery of a base existing in rice polishings which promptly cures fowls suffering from polyneuritis gallinarum. We have also found that this base is not the only protective substance contained in rice polishings.
>
> We have succeeded in protecting fowls by two other groups of substances.
>
> Most of the more recent investigators have abandoned feeding experiments because they are so tedious and time consuming, and have relied upon curative experiments. It is now evident that both methods must be used in conjunction in order to obtain all the facts.
>
> We have also treated with the extract which had previously proved so successful in curing infantile beriberi a case of pernicious cardiac beriberi in an adult. The results in this case were quite as gratifying and resulted in prompt relief of the cardiac disturbance. Cases of chronic dry or paralytic beriberi, however, seem to be only very slowly improved by the use of this extract.

SPRUE AND FILARIASIS.

Some work has been done on these two subjects, but owing to the lack of patients with these diseases, very little has so far been accomplished.

TRANSPORTS.

SANITARY CONDITION.

The sanitary condition of the various transports and the accommodation provided for troops on them has been in the main satisfactory, and the majority of the sanitary faults which have existed or have arisen from time to time have been corrected. The sanitary inspector of the Department of the Philippines reported that from a sanitary point of view there were several serious structural defects on the transport *Dix*. The hospital, butcher shop, bakery, and the doors of the meat and vegetable storeroom are all badly located, being placed on the same deck with the live stock, and in such close proximity to the stalls as to be constantly in danger of contamination from the dirt and sweepings from this source. The butcher shop is in a confined space with no ventilation and is foul with odors from the stock stalls. In this space are the doors of the meat and vegetable storage rooms and the commissary storeroom. The hospital is too small, and it is without bathing or toilet facilities. He recommends as follows:

> (1) That proper hospital accommodations be provided, consisting of a ward of four beds, the necessary toilet and bathroom facilities, and sleeping quarters for the Hospital Corps' personnel of two men. There should be one compartment for contagious cases, with space for two beds.
>
> (2) The quarters for the transport surgeon should be increased in size, with an additional room for an office.
>
> (3) Additional shower baths, water-closets, and urinals for both officers and crew should be installed, and proper messing facilities for the crew provided.
>
> (4) Provision should be made for placing on the upper deck, away from the stock stalls, the following: (*a*) All mess rooms; (*b*) all sleeping rooms for the ship's officers; (*c*) bakery, butcher shop, and storerooms; (*d*) hospital.

One case of smallpox and three cases of varioloid, all Philippine waiters, occurred on the *Sherman* in April, 1912, and one case of varioloid (a coal passer) on the *Thomas*, also in April, 1912.

The surgeon on the *Thomas* in August recommended:

> That a small wire cage be built adjoining the insane ward on the hospital deck aft, so that insane patients can stand up and walk around during transportation to the United States. There are 8 square yards of floor space in the aisles in the detention ward which does not give patients enough room to exercise and keep in good condition. They are consequently constipated and hard to manage.

This recommendation received the approval of the higher authorities, and the chief of the Quartermaster's Corps directed that a knock-down wire inclosure be constructed.

The surgeon on the *Logan*, in May, 1912, reported that:

> It is customary for the Army and Navy to render reports to the transport surgeon relative to the contagious diseases at the stations from which they report. None were received from Bremerton or Chicago training station (Navy).
>
> The sailors and marines were highly infected, and measles and mumps broke out almost as soon as we set sail. Everything was done to check the contagion, including isolation and daily examinations, but we had 18 cases of measles and 22 cases of mumps; of the former only 2 were from the Army, and they, no doubt, contracted it from the sailors and marines.

This matter was referred to the Navy Department for action. In the same report the surgeon recommended that the roller towels used in the first-cabin toilets should be replaced by hand towels.

The general superintendent of the transport service ordered 100 rolls of paper towels for this purpose. These have been used in several of the large hospitals, and have proven to be very satisfactory. They will, no doubt, be especially satisfactory on the transports for the required use.

In the last annual report of this office there was some discussion relative to the quarantining in Manila of transports on account of the occurrence of cases of measles on board. The commanding general, Department of Philippines, directed the tropical board to make a full investigation and report of the occurrence and mortality of measles in Manila. The board closed an exhaustive report as follows:

> Summarizing all of the preceding we may say that measles exists in these islands; that it is a contagious disease which in the past year has prevailed extensively and dangerously; that it has long existed here and has usually been mild in type; that it has lately shown a higher mortality, which in Manila approximates that of other countries; that the disease has been repeatedly introduced on transports, but we are unable to find evidence that the cases so introduced were unusually virulent; that its spread on and from transports seems well controlled at least as relates to troops; that it may be and almost certainly is imported at times from Hongkong, Japan, and other places; that its spread and possibly its increased severity (whether due to old or recently introduced strains) is likely traceable to schools and increased domestic travel; that no adequate precautions, if any, have been taken during 1911 and 1912 to prevent such spread by schools; that its virus quickly dies outside the body; that transmission by fomites is not disproven, but in view of the known instability of the virus we think that it probably can not occur after more than a few days; that it is impracticable to prevent the occurrence of measles on transports.
>
> Consequently: (A) We believe that the following measures would be most effective in limiting the introduction of measles by transports and its spread from them:
>
> (1) The military authorities continue to exercise all the care heretofore exercised to prevent the spread of the disease.
>
> (2) That in the fullness of precaution each infected man's locker and his clothing in use be disinfected on the transport as soon as the diagnosis is made.
>
> (3) That all personnel infected be sent to hospitals and suspects be kept under observation of medical officers in hospital if necessary if belonging or attached to the military service, while civilians infected or exposed be notified to the bureau of health and placed under its control.
>
> (4) That heavily infected or recently generally exposed commands be quarantined in detention camps on shore.

GENERAL HOSPITALS.

LETTERMAN GENERAL HOSPITAL, SAN FRANCISCO, CAL.

This hospital is used as a base hospital for the Philippines and Hawaii; a post hospital for the Presidio, San Francisco, Fort Winfield Scott, and several smaller posts in the harbor of San Francisco, and a general hospital for the western part of the country. It is the largest general hospital in the Army.

During the year a new officers' ward, isolation ward, and kitchen were completed and occupied. The remodeling of all the toilet rooms and diet kitchen has been completed. The roads, walks, and grounds have been improved. The commanding officer states that plans have been drawn and approved for a hydrotherapeutic building, a nurses' dormitory, and an addition to the detention ward, all of reinforced concrete construction. He recommends that no further construction of wood be done, but that the older wooden buildings be gradually replaced by reinforced concrete.

Excellent professional work has been done in all departments, and the field of usefulness of the hospital has been materially extended during the year. Only one case of typhoid fever was treated during the year, a recently discharged soldier from Alaska, who had not received the typhoid prophylactic. The work of the disability board, while requiring a great deal of time and care, has been a decided advantage.

The number of patients admitted during the year, including civilians and general prisoners, was 3,017, this being an increase of 45 over the preceding year. There were 231 cases remaining in hospital December 31, 1911, making a grand total of 3,248 patients treated in this hospital during the year. Some of these patients were treated for more than one cause, and in the hospital tabulation more than one case was counted for such patients. The total cases treated were 3,435. Of this number of cases 106 were officers, 2,709 enlisted men, 599 civilians, and 21 general prisoners. There were 1,600 medical cases, 1,155 surgical, 533 venereal, and 147 mental. The daily average number of patients was 255.5. Of this number 11.1 were officers, 215.3 enlisted men, 27.4 civilians, and 1.6 general prisoners. The average number of days in hospital for each case was as follows:

	Officers.	Enlisted men.	General prisoners.	Civilians.	
				Male.	Female.
Medical	44.72	24.27	10.50	16.40	12.28
Surgical	29.27	30.02	36.8	23.16	14.45
Venereal	18.67	31.27	36.8	18.95	7.00
Mental	84.00	76.10	51.83	44.00	19.00

The following tables show the movement of the sick, together with the principal causes of admission, during the calendar year of 1912, civilians and general prisoners being included:

	Officers and enlisted men.	General prisoners.	Civilians.
Remaining in hospital Dec. 31, 1911	201	2	28
Admissions:			
Admitted from command	143	1	32
Admitted by transfer	2,272	18	44
Otherwise	46	0	461
Total to be accounted for	2,662	21	565
Dispositions:			
Returned to duty	1,916	13	26
Died	31	0	29
Discharged on certificate of disability	322	0	0
Discharged expiration term	27	2	0
Transferred to Government Hospital for Insane	32	1	0
Transferred to Army and Navy Hospital, Hot Springs	5	0	0
Transferred to general hospital, Fort Bayard	60	0	2
Transferred to other hospitals	15	0	0
Otherwise disposed of	37	1	483
Total dispositions for the year	2,445	17	540
Remaining in hospital Dec. 31, 1912	217	4	25

Admissions (with cause).	States.	Islands.	Total.
For gunshot wounds	20	1	21
Diarrhea	18	6	24
Malaria	47	0	47
Typhoid	1	0	1
Rheumatic affections	74	2	76
Venereal	454	40	494
Injuries	327	15	342
Insanity	44	51	95
Alcoholism	59	0	59
All others	1,675	183	1,858
Total	2,719	298	3,017

There were 60 deaths during the year, the causes being as follows:

Diseases of the nervous system	3
Diseases of the circulatory system	7
Diseases of the respiratory system	5
Diseases of the digestive system	7
Tuberculosis	9
Nephritis	4
Carcinoma	8
Marasmus	1
Suicides	4
Poisoning and trauma	5
Died, not on sick report	7
	60

Of the patients dying, 31 were officers and enlisted men, and 29 were civilians.

There were 322 discharged on certificate of disability. Of this number 233 were not in line of duty, and 89 in line of duty.

The causes were as follows:

General diseases	82
Diseases of the nervous system and organs of special sense	117
Diseases of the circulatory system	20
Diseases of the digestive system	7
Diseases of the genito-urinary system (nonvenereal)	5
Diseases of the bones and organs of locomotion	45
Condition due to external causes or violence	34
Other causes	12

The largest number of discharges for any one cause was 25, for "flat foot," and 25 for constitutional psychopathic state. There were 20 for defective mental development; 18 for gonorrheal urethritis; 15 for chronic alcoholism; and 13 for syphilis.

The following is a statement of the admissions and dispositions of insane patients during the year:

	Officers.	Enlisted.	Civilians.	General prisoners.
Remaining Dec. 31, 1911		20		2
Admitted	1	118	7	2
Total to be accounted for	1	138	7	4
Transferred to Government Hospital for Insane	1	31		1
Discharged on certificate of disability		72		
Sent to recruiting offices for disposition		13		
Returned to duty, left hospital, etc		8	5	1
Died			1	
Total dispositions	1	124	6	2
Remaining in hospital Dec. 31, 1912		14	1	2

An active surgical clinic is maintained at this hospital, the following being a condensed tabular statement of the surgical operations:

Operations.	Officers.	Enlisted men.	Total.	Retired officers.	Retired enlisted.	Accepted recruits.	General prisoners.	Civilians.	Grand total.
Cranium	0	1	1	0	0	0	0	1	2
Eye	1	5	6	0	0	0	0	2	8
Ear	1	1	2	0	0	0	0	0	2
Nose	1	10	11	0	0	0	0	31	42
Throat	2	35	37	0	1	0	0	47	85
Face	1	6	7	0	0	0	0	4	11
Neck	4	8	12	1	0	0	0	0	13
Upper extremity	0	17	17	0	3	0	0	4	24
Thorax	0	5	5	0	0	0	0	3	8
Abdomen (laparotomy)	14	115	129	4	1	1	0	75	210
Gynecological:									
External								106	106
Internal								79	79
Lower extremity	7	59	66	0	0	0	1	23	90
Major (not included)	1	10	11	1	0	0	0	9.	21
Minor (not included)	2	92	94	1	3	0	0	18	116
Total	34	364	398	7	8	1	1	402	817

Included in this list are 139 operations for appendicitis, 48 for hernia, 28 for hemorrhoids, and 61 for endometritis. In the gynecological department 51 women were delivered at term, and there was one stillbirth. There were 15 incomplete abortions rendered complete.

Of the operations performed, one was reported as partially successful, four as failures, and three were followed by death. The cases in which deaths occurred were gunshot wounds of the neck, hypertrophied prostate, and intestinal obstruction, with gangrene.

The following is a statement of the work done in the eye, ear, nose, and throat clinic:

	Hospital cases.	Out cases.
Officers and enlisted men	399	295
Families of officers and enlisted men	37	171
Civil War veterans	3	3
Civilian employees	11	28
Families of civilian employees	0	11
Nurses	3	0
Examinations; Army nurses	0	25
Total	453	533

A large department laboratory is maintained for the use of the hospital, and for the special work of the posts on the Pacific coast. The report of the work done will be found under the general heading of "Laboratories," page 157.

The mean strength of the personnel on duty at this hospital for the year was: Officers 13, Army Nurse Corps 39, Hospital Corps 158, post noncommissioned staff 2, and Signal Corps 1.

There were 27 civilians employed by the Medical Department and 14 by the Quartermasters Corps on duty in the hospital during the year.

WALTER REED GENERAL HOSPITAL.

This is the general hospital at Washington, D. C., and also serves as post hospital for Washington Barracks, D. C., an auto ambulance conveying the patients from the post at sick call and answering emergency calls. Since the last annual report, a kitchen and mess room for the hospital proper has been completed and an addition has been made to the nurses' quarters, which will now accommodate 24 nurses in a suitable way. Work is being pushed on the isolation hospital, which will be completed in a short time. When the barrack building was vacated by Field Hospital No. 3, October 21, 1912, it was immediately occupied by the Hospital Corps detachment on duty at this hospital. This building is a substantial and well-built structure and very suitable for its purpose. A part of the basement has been altered for the purpose of establishing a post exchange. This gives the men the benefit of this much needed institution. The quartermaster has a seeding and planting program whereby the appearance of the grounds will be improved from year to year as funds become available. There are only two sets of officers' quarters. The commanding officer is of the opinion that the Government would be far better and more economically served by building quarters for all officers on duty there.

The number of cases admitted during the year, including retired officers, retired and discharged enlisted men, and civilians, was 687, this being an increase of 122 over the preceding year. Of this number, 104 were officers, 411 enlisted men, 19 retired officers, 23 retired and discharged enlisted men, 120 civilians, 2 general prisoners, and 8 members of the Army Nurse Corps. Three hundred and ninety of these cases were medical and 297 surgical. There were 52 cases remaining on sick report December 31, 1911, making a total of 739 treated during the year. The daily average number of patients was as follows: Officers, 12.34; enlisted men, 35.54; retired officers, 0.863; retired and discharged soldiers, 1.65; Army Nurse Corps, 0.30; civilians, 5.615; and general prisoners, 0.05. Total, 56.358.

The following table shows the movement of the sick, together with the principal causes of admission, during the calendar year 1912, civilians being included:

Remaining on sick report, Dec. 31, 1911	52
Admissions:	
For gunshot wounds	2
For diarrhea and dysentery	10
For malarial fevers	31
For typhoid fever	4
For rheumatic affections	14
For venereal diseases	58
For injuries	95
For insanity	18
For alcoholism	11
For all other causes	444
Total admissions during the year	687
Total admissions to be accounted for	739
Dispositions:	
Total returned to duty	389
Discharged for disability	46
Discharged per expiration of term	6
Deaths from all causes	18
Deserted	2
Transferred to other general hospitals	30
Otherwise disposed of	184
Total dispositions during the year	675
Remaining on sick report Dec. 31, 1912	64

There were 18 deaths. Of this number, 3 were officers, 8 enlisted men, 2 retired officers, 2 retired soldiers, and 3 civilians. The following were the causes of the deaths:

Cerebral concussion	1	Chronic nephritis	2
Typhoid fever	1	Sarcoma	1
Sprue	1	Chronic amoebic dysentery	1
Pyemic liver abscess	1	Apoplexy	1
Appendicitis	1	Atrophic cirrhosis	1
Fracture cervical vertebra	1	Chronic interstitial pneumonia	1
Pernicious anemia	2	Fracture, left hip	1
Mitral insufficiency	2		

There were 46 men discharged on certificate of disability. The causes were:

Flat foot	10	Chronic endocarditis	2
Psychosis	5	Arthritis, chronic	2
Nocturnal enuresis	3	Result fracture	2
Chronic amoebic dysentery	2	Others	20

An active surgical clinic is maintained at this hospital. The following is a statement of surgical conditions for which operations were performed.

Hernia	25
Appendicitis	43
Carcinoma, general, abdominal	1
Cholecystitis	1
Cholelithiasis	1
Intestinal obstruction	3
Abscess left iliac fossa	1
Duodenal ulcer	1
Exploratory laparatomy	1
Hemorrhoids	10
Fistula in ano	3
Epithelioma of scalp	2
Phimosis	10
Varicocele	5
Adenitis	12
Fibrous ankylosis joint	11
Bad result fractures	4
Amputations	5
Diseases of the eye	3
Diseases of the ear	1
Diseases of the nose	24
Diseases of the throat and pharynx	124
Diseases of the neck and thorax	3
Other diseases of the genito-urinary system, not specified above	8
Diseases of the vascular system	1
Diseases of the skin and cellular tissue not specified above	8
Disease of bones	6
Diseases of joint, not specified above	4
Other diseases, general	5
Gynecological:	
Retroversion of uterus	6
Cystic ovary	4
Lacerated perineum	5
Endometritis	9
Carcinoma	1
Other gynecological	6

Two operations which were performed during the last few months by Lieut. T. J. Leary are considered worthy of special mention. These operations were the removal of the gall bladder in two cases of chronic typhoid carriers. One case was that of First Class Pvt. M. M., Engineer Corps, mentioned on page 47 of Annual Report of the Surgeon General for 1911. This man had been under observation since September 5, 1910, and during all this period had been a constant typhoid carrier. The other case had a cholecystostomy done several months before. A permanent fistula had formed with typhoid bacilli present at all times in discharge, as well as in the feces. After operation the typhoid bacilli disappeared from the urine and feces in both cases. These cases will be carefully followed up to determine the permanent result.

The following is a tabular statement of the work done in the laboratory during the year:

Examinations of—	
Urine	5,059
Blood	831
Feces	865
Sputa	916
	7,671

The average number of medical officers on duty during the year was 7, enlisted men 70, and Army Nurse Corps 18.

GENERAL HOSPITAL, FORT BAYARD, N. MEX.

This hospital is for the treatment of cases of pulmonary tuberculosis in the Army. Fort Bayard is situated in the southwestern part of New Mexico, the reservation originally extended about 4 miles north and south and 3 miles east and west and had an area of approximately 13½ square miles. Several years ago it was enlarged by the purchase of land to the north and by the addition, through Executive order, of various tracts of public land, the object of the enlargement being the more perfect protection of the watershed and the acquisition of additional water. On the north the land rises rapidly reaching the height of 9,000 feet at Black Peak, about 8 miles from the post. In this direction the surface is broken by rocky hills covered with piñon, juniper, and western yellow-pine trees. The country is picturesque, and fine views are to be had from the hills. To the south the valleys widen into vast treeless plains. The feature which constitutes the peculiar excellence of the climate of Fort Bayard and distinguishes it from other parts of the Rocky Mountain Plateau is its relative equability. The climate is such that outdoor life is pleasant throughout the year. Two factors contribute to secure this result—the altitude and the geographical position. The altitude, 6,165 feet, prevents excessive heat; the hot plains of a lower elevation which surround on all sides the mountainous region in which Fort Bayard is situated temper the cold winds of winter and prevent excessive cold.

No new buildings were constructed during the year. A silo at the dairy was erected at the expense of the hospital fund. An additional well was dug and provided with an electrically operated pump. A small concrete dam was constructed upon Cameron Creek at a point about half a mile below the post. The water thus collected has been brought upon the lands below the dam, thus rendering possible the irrigation of about 10 acres of excellent land hitherto unavailable for profitable cultivation.

The commanding officer states that the increased number of beneficiaries of the Soldiers' Home under treatment at this hospital has resulted in overcrowding the wards for ambulant patients, so that it has been necessary to quarter some of the patients in the old wooden barrack known as ward 5, which is quite unsuited for the purpose. The number admitted during the year, including beneficiaries of the Soldiers' Home, civilians, and general prisoners, was 686, this being an increase of 62 over the preceding year. There were 242 patients remaining December 31, 1912, making a total of 928 cases treated during the year. Of this number 29 were officers, 361 enlisted men, 463 beneficiaries of the Soldiers' Home, and 75 civilians. Of the number treated, 888 were medical cases and 40 were surgical. The daily average of officers was 12.63, enlisted men, 79.61; beneficiaries of the Soldiers' Home, 139.95; civilians, 13.79; total, 245.97.

The following tables show the movement of the sick during the year, with the principal causes of admission and disposition.

	Officers, enlisted men, and civilians.	Beneficiaries of the Soldiers' Home.	Total.
ADMISSIONS.			
For tuberculosis	245	304	549
For injuries	22		22
For enterocolitis	1		1
For leukemia	2		2
For emphysema, hypertropic	1		1
For rheumatism	6		6
For appendicitis	4		4
For gunshot wound	2		2
For venereal diseases	21		21
For sapremia following childbirth	1		1
For alcoholism	7		7

	Officers, enlisted men, and civilians.	Beneficiaries of the Soldiers' Home.	Total.
ADMISSIONS—continued.			
For pneumonia	2		2
For dysentery	1		1
For other causes	67		67
Total admissions in 1912	382	304	686
Remaining Dec. 31, 1911	83	159	242
Total to be accounted for	465	463	928
DISPOSITIONS.			
Returned to duty	154		154
Died	24	32	56
Discharged for disability	85		85
Deserted	1		1
Discharged by expiration of term of service	2		2
Transferred to other hospitals	4		4
Otherwise disposed of	54	281	335
Total dispositions in 1912	324	313	637
Remaining Dec. 31, 1912	141	150	291
Total accounted for	465	463	928

Fifty-four deaths occurred during the year. Of this number, 2 were officers, 21 enlisted men, 24 beneficiaries of the Soldiers' Home, and 7 civilians. Chronic pulmonary tuberculosis caused 42 deaths, tubercular meningitis 2, lobar pneumonia 2, acute pneumonic tuberculosis 1, several other diseases 1 each.

The following is a statement of discharges from the Army, with causes, of enlisted patients:

By expiration of term of service	2
For disability:	
Pulmonary tuberculosis	80
Morphinism, chronic	1
Laryngitis, tuberculous	1
Leukemia, spleno-medullary	1
Rheumatism, acute, articular	1
Mental insufficiency	1
Total	87

Forty-nine surgical operations were performed during the year, of which number 48 were successful and 1 was a failure. There were no deaths following operations.

The following is a condensed statement:

Genito-urinary	8	Skin and cellular tissues	14
Anus and rectum	6	Mouth and pharynx	2
Abdomen	11	Others	6
Thorax	2		

The laboratory work of the year may be itemized as follows:

Examinations of sputum	8,197	Miscellaneous examinations	39
Examinations of urine	1,725	Autopsies, human	52
Examinations of blood	372	Autopsies, bovine	11
Tuberculin tests, bovine	183	Histological examinations	256
X-ray examinations and photography	89	Others	212

The commanding officer states:

> There were admitted 2 cases of tuberculosis without pulmonary involvement (1 of tuberculous orchitis, 1 of tuberculous cystitis) and 32 cases of suspected pulmonary tuberculosis in which the diagnosis has not been confirmed, the larger part of these being cases of chronic bronchitis. The large number of cases of chronic bronchitis was chiefly due to the unusual prevalence of this disease at Vancouver Barracks, Wash. Usually the mistake in diagnosis is of the reverse kind—pulmonary tuberculosis is considered to be simply bronchitis. In the cases now under consideration the profuse purulent expectoration, the presence of more or less fever, and the youth of the patients led to the rendering of the diagnosis of probable pulmonary tuberculosis, although the sputum was always negative for tubercle bacilli.. In cases of soldiers who usually become entitled to a pension if discharged for tuberculosis, while an early diagnosis of their condition is undoubtedly desirable, it is equally important in the interest of the individual as well as of the Government that the diagnosis of tuberculosis should be based only upon well-marked and characteristic physical signs. The finding of tubercle bacilli in the sputum should not, of course, be insisted upon as a necessary condition in making the diagnosis of tuberculosis of the lungs, at the same time its absence in a series of cases in which the sputum is abundant should excite suspicion as to the nature of the disease.

The number of completed cases of pulmonary tuberculosis in 1912 was 394. Important complications were present in 159 cases, as follows:

Tuberculous laryngitis	65
Tuberculous pleurisy	59
Otitis media, chronic, purulent	14
Syphilis	14
Asthma	9
Myocarditis	6
Fistula in ano	6
Valvular disease of the heart	4
Epididymitis and orchitis, tuberculous	4
Enteritis, tuberculous	4
Adenitis, tuberculous	5
Alcoholism, chronic	3
Cystitis, tuberculous	2
Empyema	2
Meningitis, tuberculous	2
Nephritis, chronic	2
Tuberculous disease of hip joint, Pott's disease, tuberculous pneumothorax, psoas abscess, and bronchiectasis (each)	1

The following table shows the result of treatment in all cases of pulmonary tuberculosis:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	46	10	21.74	13	28.26	14	30.43	9	19.57	......	......
Moderately advanced	288	18	6.25	49	17.01	168	58.33	50	17.36	3	1.05
Far advanced	337	4	1.19	15	4.45	170	50.45	101	29.95	47	13.96
Acute miliary	1	......	......	......	......	......	......	......	......	1	100.00
Total	[1] 672	32	4.78	77	11.40	352	52.38	160	23.80	51	7.64

[1] Includes 83 cases under treatment one month or less. Does not include 3 cases under treatment less than one week.

The result of treatment in completed cases of pulmonary tuberculosis was as follows:

Class.	Number.	Apparently cured.		Arrested.		Improved.		Unimproved.		Died.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Incipient	27	10	37.04	7	25.92	8	29.63	2	7.41		
Moderately advanced	164	10	6.10	14	8.54	111	67.68	26	15.85	3	1.83
Far advanced	202	2	.99	3	1.49	94	46.53	56	27.72	47	23.27
Acute miliary	1									1	100.00
Total	[1] 394	22	5.58	24	6.09	213	54.06	84	21.32	51	12.95

[1] Includes 47 cases under treatment one month or less and 4 fatal cases under treatment one week or less.

The mean strength of the personnel on duty at this hospital for the year was as follows:

Medical officers (including 3 under treatment for tuberculosis)	10.7
Other officers (including 2 officer patients on light duty)	3.0
Hospital Corps (not including 3.16 per cent under treatment for tuberculosis)	121.89
Post noncommissioned staff (quartermaster sergeants, quartermaster corps)	2.98
Quartermaster Corps	.12
Signal Corps	.207
Army Nurse Corps	20.814

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

This hospital is intended especially for patients having diseases in which hydrotherapeutic treatment is indicated. Paragraph 1463, Army Regulations, 1910, states that—

> The Army and Navy General Hospital, Hot Springs, Ark., is under the direction of the Secretary of War, and is devoted to the treatment of the officers and enlisted men of the military and naval service of the United States, cadets at the United States Military and Naval Academies, officers of the Revenue-Cutter Service, officers of the Public Health and Marine-Hospital Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States, for such diseases as the waters of the hot springs of Arkansas have an established reputation in benefiting.

Some improvements and additions were made during the year. A new diet kitchen was provided; the old ice plant was replaced by a new 12-ton refrigeration system having a capacity of not less than 5 tons of ice daily; the heating system has been improved; several additions have been made to the laundry equipment; and a new room has been furnished and equipped in the basement of the administration building for use as an X-ray treatment room, with an adjoining dark room. The commanding officer states that steps have been taken to secure bids for the construction of a new nurses' home. He states that the additions most urgently needed are, in the order of their immediate importance, an officers' ward, quarters for noncommissioned officers, barracks for Hospital Corps. Next to these the greatest need is for an addition to and renovation of the bathhouse. During the year, 815 cases were admitted, this being an increase of 69 over the preceding year. Of this number 34 were officers, 104 enlisted men, 38 retired officers, 87 retired enlisted men, and 552 civilians, chiefly veterans of the Civil War, admitted in accordance with the law. The daily average was 99.5. The following tables show the principal causes of admission and method of disposition of all cases:

Remaining in hospital Dec. 31, 1911	115
Admissions:	
Diseases of the respiratory system	14
Diseases of the heart	19
Diseases of the urinary system	40
Rheumatism, articular	121
Rheumatism, muscular	35
Gastritis	12
Hernia, inguinal	6
Diseases of the kidneys	34
Arthritis	38
Syphilis and results	47
Gonorrhea and results	9
Diseases of the circulatory system	140
Malarial affections	8
Injuries	25
All other causes	267
Total	930
Dispositions:	
Returned to duty	100
Died	18
Discharged on surgeon's certificate of disability	36
Transferred	4
Discharged from hospital (civilians)	661
Otherwise disposed of	9
Remaining Dec. 31, 1912	102
Total	930

There were 18 deaths during the year; of this number 1 was an officer, 3 were enlisted men, and 14 were civilians. The following table shows the causes of deaths:

Chronic interstitial nephritis	2
Chronic parenchymatous nephritis	2
Diarrhea, chronic	1
Mitral regurgitation	2
Aortic obstruction and mitral regurgitation	1
Mitral insufficiency	1
Asthenia	1
Paralysis agitans, complicated by diarrhea	1
Carcinoma, pylorus and liver	1
Crushing injury to chest	1
Myelitis, chronic	1
Pyonephrosis and secondary pneumonia	1
Septicemia and lobar pneumonia	1
Pneumonia	1
Carcinoma of colon	1
Total	18

There were 36 discharges on certificate of disability.

Arthritis deformans general	2
Rheumatism, articular	4
Nervous and mental diseases	8
Diseases, heart, and blood vessels	2
Result of amputations	4
Nephritis	2
Others	14
Total	36

Suitable equipment for the handling of all surgical cases that may arise is being furnished this hospital. The surgical work done is gradually increasing. During the year 29 surgical operations were performed. The laboratory has been thoroughly equipped for all bacteriological work, including the Wassermann test. The following is a statement of the laboratory work done:

Examinations of blood	139
Examinations of feces	23
Examinations of sputa	24
Examinations of urine	1,454
Wassermann tests	55
Others	19
Total	1,714

The mean daily strength of the personnel on duty during the year was as follows:

Medical officers	4.32
Post noncommissioned staff	1.00
Hospital Corps	54.17
Army Nurse Corps	4.75
Mean aggregate	64.24

DIVISION HOSPITAL, MANILA, P. I.

The name of the general hospital at Manila, which has been heretofore the Division Hospital, was changed to "Department hospital" by C. A. R. 26, 1913.

This hospital is the general hospital for the Philippine Islands. It differs from the general hospitals in this country in that it is not directly under the control of the Surgeon General, but owing to its geographic location it is under the authority of the division commander. Several improvements and additions to this hospital, mentioned in the last annual report as very necessary, were made during the year.

1. A second story was built over a portion of the quarters of the Hospital Corps detachment for the occupancy and use of the board for the study of tropical diseases. The work was completed about August 31, 1912. The rooms vacated by the tropical board were equipped with new cabinets, shelves, tables, etc., for use of the general laboratory of the hospital.

2. The commanding officer reported that the building of a maternity ward over a portion of the officers and women's ward was to be completed about March 1, 1913. This ward gives ample accommodations for the care of maternity cases. There are eight rooms for patients. A porch for convalescents is one of the features of this new ward.

There have been a number of minor repairs and improvements. Several buildings have been painted both inside and out. The commanding officer reported on January 1 that when all the work in progress was completed he believed that the hospital would be in better general repair than it has ever been since its occupancy as a military hospital by the Army of the United States.

In regard to new construction the commanding officer is of the opinion that it would be economy in the end to build a new concrete hospital, on the pavilion plan, on the present site, provided the American occupancy is to continue. At the present time an intercommunicating telephone system is needed to facilitate administration, and an automobile ambulance is requested by the commanding officer. There is also some additional repair work necessary.

The total number admitted to this hospital during the year, including civilians entitled to medical treatment, was 2,641.

Admissions, 1912.

	Medical.	Surgical.	Total.
Officers	96	53	149
Enlisted men (American)	1,057	565	1,622
Philippine Scouts	91	46	137
Civilians	405	328	733
Total	1,649	992	2,641

In addition to this number there were 107 patients remaining under treatment December 31, 1911, making a total of 2,748 treated. This was an increase of 229 over the preceding year.

The daily average was:

Officers	7.01
Enlisted men (American)	81.50
Philippine Scouts	13.22
Civilians	20.08
Total	121.81

The following table shows the movement of the sick, together with the principal causes of admission, during the year 1912:

Cause.	Officers.	Enlisted men (Americans).	Scouts.	Civilians.
ADMISSIONS.				
For gunshot wounds		4	2	
Diarrhea and dysentery	5	33	6	15
Malarial fevers	8	67	18	15
Typhoid fever			1	
Rheumatic affections	5	25	5	27
Venereal diseases	4	353	8	35
Injuries	11	92	8	82
Insanity	1	39	5	5
Alcoholism		46		11
All other causes	115	963	84	543
Total	149	1,622	137	733
Total admissions during the year				2,641
Remaining in hospital and quarters Dec. 31, 1911				107
Total to be accounted for				2,748
DISPOSITIONS.				
Returned to duty	113	1,355	89	15
Discharged on surgeon's certificate of disability			45	
Discharged expiration term		2	1	
Deaths, all causes		9	1	18
Transferred other hospitals	29	270		
Otherwise disposed of	7	3		698
Total	149	1,639	136	738
Aggregate				2,662
Remaining in hospital Dec. 31, 1912				83
Remaining in quarters, Dec. 31, 1912				3

There was only one case of typhoid fever treated during the year. This case was an unvaccinated scout, who died. Not a case of beriberi (military) was treated here during the year. Twenty-three deaths occurred as compared with 15 in 1911. The following table shows these deaths with causes:

Cause.	Officers.	Enlisted men.	Scouts.	Civilians.
Burns:				
Toxemia following				1
Shock following				1
Cancer of liver			1	
Cardiac dilatation				1
Colitis, acute catarrhal				1
Delirium tremens, alcoholic		1		
Hemorrhage:				
Intestinal				1
Gastric		1		
Cerebral				1
Injuries (fracture of skull)		1		
Malarial fever		1		
Nephritis, chronic		1		
Œdema of brain, alcoholic		1		
Peritonitis:				
Typhoid fever		1		
Appendicitis		1		
Pneumonia:				
Lobar				1
Broncho				1
Poisoning:				
Bichloride of mercury				
Phenol, accidental				1
Tetanus				2
Valvular heart disease				1
Injuries, shock following		1		
Total	0	9	1	13
Aggregate, all classes				23

American soldiers are not discharged for disability in the Philippine Islands, except in very rare cases, and there were none discharged there in 1912. All the native enlisted men physically disabled for service, are discharged in the islands. The following table shows the number discharged at this hospital during the year with causes:

Carcinoma, cervical, bilateral	1
Defective teeth	1
Eye trouble:	
Retino-choroiditis, bilateral	1
Leukoma, right eye	1
Fistula in ano	1
Gonorrheal cystitis	1
Gonorrheal arthritis	1
Hysteria, major	1
Insanity, all classes	4
Loss of left leg	1
Mental constitutional inferiority	1
Neurasthenia	1
Rheumatism, muscular	1
Synovitis, chronic, right knee	1
Tuberculosis, pulmonary	22
Tuberculosis of cervical glands	1
Wounded in action:	
Loss of left arm	3
Loss of left hand	1
Painful scar	1
Total	45

In 1911 there were 26 discharges for disability at this hospital.

An active surgical clinic is maintained. The following is a statement of surgical conditions for which operations were performed.

Abscesses:		Adenitis	66
Hepatic	2	Appendicitis	47
Appendicital	1	Abortion	3
Periurethral	3	Cholelithiasis	2
Others	10	Cholecystitis	3
Cellulitis	5	Hemorrhoids	15
Cystic ovary	5	Hydrocele	8
Compression of brain	1	Hæmothorax	2
Abdominal carcinosis	1	Intestinal obstruction	1
Dislocations of elbow	5	Phimosis	25
Endometritis	16	Peritonitis	1
Empyema	3	Sarcoma	1
Fistula in ano	6	Uterus malposition	11
Fractures	5	Varicocele	6
Hernia	18	Others	89

There were 12,559 dressings.

In the obstetrical department 39 labors occurred at term.

The following is a report of the hospital laboratory work during the year:

Examination of—		Examination of—Continued.	
Blood	1,616	Autopsies	14
Feces	632	Cultures	70
Sputum	918	Milk test	4
Urine	2,669	Stomach contents	13
Smears	476	Sections	23
Water	533	Vaccines	14
Wassermann reactions	1,740		

The average number of medical officers on duty was 12, dental surgeons 2, Hospital Corps men 97, Army Nurse Corps 22.

Two hundred and twenty-three patients were transferred to the United States either for discharge on certificate of disability or for further treatment. Of this number 59 were for tuberculosis, 44 for insanity, and 11 for gonorrheal arthritis.

One hundred and eighty-five operations were performed on the eye, ear, nose, or throat. There were 10,619 dressings or treatments and 402 refractions.

PROVIDENCE HOSPITAL.

The act approved March 24, 1912, having appropriated $19,000 for the support and medical treatment of destitute patients in the city of Washington, D. C., under a contract to be made with Providence Hospital by the Surgeon General of the Army, the relief afforded was as follows:

Patients in hospital July 1, 1912	87
Admitted during the year	1,281
Total number treated	1,368
Average number admitted per month	114
Number remaining in hospital June 30, 1913	96
Total number of days' treatment afforded	35,463
Average number of days' treatment per patient	26
Average number of patients treated per day	97
Longest term of treatment (days)	365
Shortest term of treatment (days)	1
Number of patients in hospital during the whole year	1

LABORATORIES.

In compliance with the request of this office of March 6, 1912, Capt Clarence L. Cole, Medical Corps, United States Army, who was in charge of the laboratory at Fort Leavenworth, was directed to proceed to Fort Sam Houston, Tex., for the purpose of establishing a laboratory at that post for the use of the Southern Department. A laboratory is thus provided for each of the departments; the one at the Army Medical School, Washington, D. C., for the use of the Eastern Department; at Fort Leavenworth for the Central Department; at the Letterman General Hospital for the Western Department; and, as stated, at Fort Sam Houston for the Southern Department. The laboratory of the tropical board has been doing the special work required of a department laboratory for the Philippine Division, and one will ultimately be established at Honolulu in connection with the department hospital for the work in that department.

ARMY MEDICAL SCHOOL.

No changes of importance have been made in this bacteriological laboratory during the past year. The work has been of a varied character, as shown in the following summaries:

TYPHOID FEVER PROPHYLACTIC.

Prophylactic was prepared in the laboratory and distributed during the six months periods as follows:

	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
	c. c.	c. c.	c. c.
Army	87,387	57,972	98,169
Navy	153,408	33,876	32,566
National Guard	23,136	12,248	28,031
Various Government departments	1,581	725	1,195
Civilians and civil institutions	1,306	362	454
Total	266,818	105,183	160,415

The usual dose is 1 cubic centimeter, except the first dose, which is 0.5 cubic centimeters.

No changes have been made in the method of preparation of the prophylactic, since the results with that at present in use have been all that could be desired.

As there are not more than two or three cases of paratyphoid fever reported yearly, it is evidently not necessary, at least in our service, to use a mixed typhoid and paratyphoid vaccine, and none has been used.

GONOCOCCUS VACCINE.

The use of gonococcus vaccine in the treatment of arthritis and other complications of gonorrhea shows a steady increase: 2,350 cubic centimeters were prepared in 1912, and 1,150 cubic centimeters during the first six months of 1913. An effort has been made to secure reports but not many have been submitted. The results reported to this office are shown in the following table:

Results obtained from the use of gonococcus vaccine.

	Cured.	Much improved.	Improved.	Not improved.	Treatment not completed.	Total.
Gonorrhea:						
Acute	15					15
Chronic	15		1	4		20
Epididymitis	13					13
Arthritis:						
Acute	5	1	5			11
Chronic	2	6	3	6	2	19
Ophthalmia, acute				1		1
Total	50	7	9	11	2	79

Gonococcus, staphylococcus, and streptococcus vaccines prepared and distributed during the six months' periods.

	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
Gonococcus:	*c. c.*	*c. c.*	*c. c.*
Army	576	543	737
Navy		12	
Civilians and civil institutions		4	
	576	559	737
Staphylococcus:			
Army	456	575	634
Civilians and civil institutions	37		6
	493	575	640
Streptococcus:			
Army	32	18	28

In addition to the vaccines mentioned, the following were prepared during the fiscal year ending June 30, 1913:

	c. c.
Autogenous	115
Pneumococcus	10
Acne	275
Staphylococcus-acne	500

Summary of clinical laboratory examinations of typhoid fever cases.

	Six months' periods ending—		
	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
Examinations of typhoid cases	183	321	246
Convalescents examined:			
Positive	6	3	2
Negative	10	11	10
Suspected carriers of contacts examined:			
Positive	19	26	8
Negative	48	92	74
Widals:			
Positive	18	32	47
Negative	33	62	45

Summary of clinical laboratory examinations of typhoid fever cases—Continued.

	Six months' periods ending—		
	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
Blood cultures:			
Positive	2	6	3
Negative	14	40	37
Blood cultures from clots:			
Positive	1	1	0
Negative	22	27	18
Examination of feces for b. typhosus:			
Positive	13	15	4
Negative	51	70	73
Examination of urine b. typhosus:			
Positive	3	0	0
Negative	44	53	30
Examination of feces for b. paratyphosus:			
Positive	0	1	0
Negative	0	8	0
Examination of feces for b. dysinteria:			
Positive	0	0	0
Negative	5	5	6
Gall bladder:			
Positive	0	2	1
Negative	0	0	1
Gall stone:			
Positive	0	0	0
Negative	0	1	1
Exudate from wound:			
Positive	0	0	0
Negative	0	1	0
Sputum:			
Positive	0	0	0
Negative	0	0	1

No chronic bacillus carriers were detected during 1912, and only one during the first half of 1913. The greater part of the material examined during the past 12 months has come from civilians at Army posts and not from the Army itself. In this, as in preceding reports, a few positive blood cultures from clots are shown. The clot is obtained from the small sample of fluid blood sent to the laboratory for Widal tests. For this purpose Wright's capsule, a hook-shaped glass tube, is in general use. With a clear serum a macroscopic Widal is made; the clot is broken up and spread over an Endo plate, from which subcultures are made in the usual manner. The method requires very little time and occasionally affords valuable information; by this method, during the past four years, about twenty cultures of the *bacillus typhosus* have been isolated.

Summary of clinical laboratory examinations.

	Six months' period ending—		
	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
Blood clots:			
Red	16	5	6
White	18	20	27
Differential counts	13	25	46
Malaria	29	63	68
Blood cultures	0	5	23
Urinalyses	164	101	77
Sputa for tubercle bacilli:			
Positive	1	77	6
Negative	27	35	29

Summary of clinical laboratory examinations—Continued.

	Six months' period ending—		
	June 30, 1912.	Dec. 31, 1912.	June 30, 1913.
Feces	35	55	57
Water, bacteriological	22	27	34
Cultures of pus, exudated, etc	49	38	121
Animal inoculations for immune sera, etc	39	137	157
Histological examinations of operative and post-mortem tissues	454	342	489
Miscellaneous examinations, gonococcus, etc	76	54	48
Wassermann examinations:			
Positive	678	601	559
Negative	653	256	624
Reexaminations	787	1,337	1,352
Examinations for treponema pallidum:			
Dark field microscope—			
Positive	4	8	8
Negative	12	12	14
Staining—			
Positive	3	1	0
Negative	2	5	0
Examinations:			
For trypanosomes	491	400	500
For coli bacilli	110	75	70
Treatments:			12
For salvarsan	32	23	
By bacterial vaccines	287	360	246
Luetin tests	....	22	28
Malta fever	....	5	0
Spinal fluid	....	4	8

STUDIES OF SYPHILIS.

During the year various phases of the syphilis question have been under investigation, and the results of the research work along this line have been published in a bulletin (Bulletin No. 3, Medical Department, United States Army) by Capts. Charles F. Craig and Henry J. Nichols.

REPORT UPON WASSERMANN TESTS.

During the year ending June 30, 1913, the total number of Wassermann tests made in this laboratory has been 4,729, of which 2,689 were reexaminations, made for the control of treatment. Of the 2,040 new cases tested, 1,160 were diagnosed as syphilis, and of these 984, or 84.8 per cent, gave a positive reaction.

The following tables give the result of the Wassermann test in the cases diagnosed as syphilis, or presenting suspicious symptoms of that disease, examined during the year ending June 30, 1913:

TABLE I.—*Results of the Wassermann test in cases diagnosed as syphilis, from July 1, 1912, to June 30, 1913.*

Stage of disease.	Number of cases.	Positive.	Negative.	Per cent positive.
Primary	242	208	34	85.9
Secondary	459	430	29	93.6
Tertiary	177	162	15	91.5
Latent	282	184	98	65.2
Total	1,160	984	176	84.8

The above table includes 13 cases of primary syphilis tested within three days after the appearance of the initial lesion, a period, it is believed, too early to obtain a positive Wassermann reaction, and 10 secondary cases tested after vigorous treatment, sufficient to have rendered a positive reaction negative. Therefore, in justice to the test, these cases should be deducted from the total number examined, and Table II gives the results after deducting these cases.

TABLE II.—*Results of the Wassermann test in 1,137 cases of syphilis examined from July 1, 1912, to June 30, 1913.*

Stage of disease.	Number of cases.	Positive.	Negative.	Per cent positive.
Primary	229	208	21	90.8
Secondary	449	430	19	95.7
Tertiary	177	162	15	91.5
Latent	282	184	98	65.2
Total	1,137	984	153	86.5

The results in the primary and tertiary stages of the disease shown in the above tables are the best that have yet been secured in this laboratory, over 90 per cent of the cases in each stage of the disease giving a positive result. This has been entirely due, it is believed, to the fact that the laboratory has been using this year an unusually effective antigen. While the bacteriologists there have always used as antigen an alcoholic extract of fœtal syphilitic liver, these antigens have varied considerably in fixation power, and in this particular case the antigen has been unusually reliable. It is perfectly evident that the accuracy and value of the Wassermann test depend almost entirely upon the reliability of the antigen employed aside from technical considerations, and in this laboratory no antigen has proven as satisfactory as that made from fœtal syphilitic livers.

A review of the Wassermann tests made in this laboratory since November 1, 1909, to date, may be of interest, as the very large number of sera tested enables one to secure an accurate idea of the percentage of positive reactions that may be expected in the various stages of syphilis.

The total number of tests made has been 13,455, of which 6,730 were reexaminations made for the purpose of controlling treatment, while 6,725 individuals were tested for diagnostic and experimental purposes. Of this number, 215 tests were made upon as many individuals in experimental work. Of the 6,275 individuals tested, 4,395 were diagnosed as syphilis, or presented suspicious symptoms of the disease. Of this number 3,670 gave a positive reaction, or 83.5 per cent. Included in this number are 80 cases in the primary stage of syphilis tested during the first three days after the appearance of the initial lesion, a period too early for a positive Wassermann reaction to be present, so far as our experience goes. In addition 71 of the secondary cases had received sufficient treatment to have rendered the reaction negative, so that these cases should be deducted from the total number if it is desired to secure a just conception of the exact results obtained in the various stages of syphilis with the Wassermann test.

In Table No. III is given the results of the Wassermann test in 4,244 cases of syphilis tested in this laboratory. These cases were all diagnosed as syphilis or presented symptoms of that disease, and it is believed that the figures demonstrate just about what the Wassermann test is capable of as an aid to diagnosis in the various stages of syphilis.

TABLE III.—*Results of the Wassermann test in 4,244 cases of syphilis.*

Stage of disease.	Number of cases.	Positive.	Negative.	Per cent positive.
Primary	823	740	83	89.9
Secondary	1,774	1,706	68	96.1
Tertiary	581	515	66	88.6
Latent	1,016	669	347	65.8
Congenital	28	25	3	89.2
Parasyphilitic	22	15	7	68.1
Total	4,244	3,670	574	86.4

The comparatively low percentage of positive results in congenital cases and in parasyphilitic disease is in part due to the small number of cases tabulated and in part to the character of the cases, many of the congenital cases being in adults, and at least half of the parasyphilitic cases suffering from ataxia.

X-RAY LABORATORY.

In this laboratory the work done in addition to instruction is represented by the following table:

Radiographs made	2,018
Lantern slides	330
Photomicrographs	160

Letterman General Hospital.

1. The amount of work performed in the laboratories, for the year 1912, was almost identical with that recorded for the previous year. The tables appended show an increase in the number of cases receiving thermal and hydrotherapeutic treatments and in the number of radiographs taken. The former increase was due to the establishment during the year of a modern hydrotherapeutic room, equipped with a Baruch table, electric light cabinet, etc.

2. Capt. John R. Barber, Medical Corps, was the pathologist for the last 11½ months; he did all of the Wassermann reactions and most of the bacteriological work.

3. The most difficult and important work assigned to the pathologist is the complement fixation test (Wassermann reaction), of which 2,426 were performed with eminently satisfactory results. Last year a luetic gastric ulcer that had masqueraded for several years as a simple ulcer and in defiance of all treatment, was reported as diagnosticated with the aid of the serum reaction and cured by specific treatment. A similar case occurred in one of the wards this year, and responded even more promptly to treatment. Two cases of low continued fever, both undoubtedly due to pulmonary syphilis, in

which tuberculosis was suspected, but in which neither tubercle bacilli nor physical signs significant of tuberculosis were found, gave positive reactions and responded to mercury hypodermically. Noguchi's luetin reaction has been employed in about a dozen cases and with apparently gratifying results. The small experience with the test the authorities believe warrants a more extended use of this diagnostic agent, especially in those tertiary cases associated with a negative Wassermann reaction.

"The complement fixation test, in gonorrheal infections, has been performed a few times with an antigen presented for experimental purposes. The reactions carried out with sera for patients known to be infected from controls turned out as expected. In the military service it is believed that if this test can be made as reliable as the Wassermann reaction it will prove of incalculable service. However, great difficulty has been experienced in making a dependable antigen, and at present this subject is receiving our attention. After many failures we have at last succeeded in getting three strains of gonococci to grow, and hope by another year to be able to employ this test as a routine measure."

4. During the year an epidemic of rabies occurred among the dogs of the city and Presidio reservation. The diagnosis was confirmed in the dogs by finding Negri bodies in 4 cases, and in 1 case Negri bodies were found in the brain of a man who died of this disease in the city, and was further confirmed in the laboratory by inoculating a dog subdurally. This experience would corroborate that of others that the finding and significance of Negri bodies in the brains of animals suspected of having the disease is a speedy, reasonably easy, and certain means of identifying hydrophobia. The Pasteur treatment was given to 10 people bitten by rabid or presumably rabid dogs. In no case did the disease develop in the subjects so treated.

5. One case of cerebrospinal meningitis, due to the diplococcus of Weichselbaum, was admitted to the hospital during the month of December. The organism was readily found in the leucocytes from the spinal fluid. The man was given antimeningitis serum intraspinally and convalesced promptly.

6. A patient with a splenic anemia which the laboratory findings proved to be a case of Banti's disease was admitted to a medical ward and subsequently transferred to the surgical side for a splenectomy which was successfully accomplished, resulting in an apparent cure.

7. Ova of the Dibothriocephalus latus tapeworm were discovered in a stool examination and subsequently verified by obtaining the entire parasite with male fern.

Record of examinations made in the pathological, bacteriological, and chemical laboratories during the year ending December 31, 1912.

Blood examinations	972	Sera for treponema	104
Urine examinations	3,356	Vaccines prepared	51
Sputum examinations	1,628	Water analyses bacteriological	336
Feces examinations	412	Water analysis, chemical	14
Pus examinations	692	Milk analyses	38
Culture examinations	623	Malt extract for alcohol content	19
Tissue examinations	169	Animal injections	136
Fluids by aspiration	30	Autopsies	45
Sera for lues (Wasserman)	2,426	Miscellaneous	17
Stomach contents	73		

Examinations of suspected typhoid specimens as follows:

Widal reactions	47
Blood cultures	18
Feces	32
Urine	21

Antityphoid vaccinations as follows:

Complete	33
Incomplete	12
Undergoing vaccination	1

Record of cases treated in the X ray, electrical, and thermal treatment laboratories during the year ending December 31, 1912.

Radiographs taken, 838, with conditions found as follows:

Fractures	283	Arthritis	14
Dislocations	19	Calculi	3
Disease of bone	38	Stricture of oesophagus	3
Aneurysm	12	Gastro-intestinal after taking bismuth	67
Foreign bodies	27	Normal	326
Synovitis	16		
Tumors	12		
Impacted teeth	16	Total	838
Spinal curvature	2		

Cases were treated by the X ray as follows:

Leukemia	2
Eczema	3
Epithelioma	2
Carcinoma	1
Lupus	3
Hodgkin's disease	1
Total	12

Cases treated by galvanic, Faradic, and high frequency electricity as follows:

Facial paralysis	2
Neurasthenia	12
Hemiphlegia	2
Muscular paralysis	7
Rheumatism	9
Synovitis	4
Old injuries	6
Total	42

Two hundred and sixteen cases were treated in the thermal and massage treatment department with a total of 6,642 treatments.

FORT LEAVENWORTH, KANS.

The number of examinations for the year exceeds that of any previous year in the history of the laboratory. The scope of the work has been widened also. The Wasserman test (Noguchi modification) is now done for all the posts in the Central Division, and, in addition to the routine laboratory examinations in connection with the various clinical departments of the post hospital, various examinations have been made of specimens submitted from other posts. The post water supply and milk supply have been examined at periodical intervals, food analyses have been made for the commissary and post exchange, and examinations of specimens from suspected cases of typhoid fever have been conducted for other posts, as heretofore. A summary of the work follows:

Summary of laboratory work in the laboratory at Fort Leavenworth, Kans., for the year ending December 31, 1912.

Typhoid examinations	74
Agglutination tests (Widal):	
Positive	6
Negative	11
Blood cultures:	
Positive	3
Negative	21
Typhoid feces:	
Positive	3
Negative	17
Typhoid urines:	
Positive	0
Negative	13
Examinations of sputum	81
Urinalyses	744
Examinations of feces	55
Blood examinations	245
Examinations of cultures:	
Throat	255
Others	311
Total	566
Examinations of smears:	
Urethral	146
Others	44
Total	190
Analyses of gastric contents	7
Food analyses	33
Animal inoculations	46
Water analyses	157
Chemical	15
Bacteriological	142
Examinations of milk	104
Chemical	72
Bacteriological	32
Wassermann tests	2,078
Antogenous vaccine prepared	11
Histological examinations of tissues	4
Autopsies	10
Treatments with salvarsan	23
Treatments with vaccine and sera	1,841
Typhoid prophylatic	1,689
Other vaccines and sera	152
Luetin tests for syphilis (Noguchi)	54
Total diagnostic, prophylactic, and therapeutic procedures for the year	6,323

MEDICAL DEPARTMENT.

The Medical Department consists of the Medical Corps, the Medical Reserve Corps, the Dental Corps, the Army Nurse Corps, and the Hospital Corps.

The following statement shows the strength of the personnel, commissioned, enlisted, and employed, by contract or otherwise, of the Medical Department on June 30, 1913:

Medical officers	424
Medical reserve officers, active duty	105
Contract surgeons	9
Dental surgeons, commissioned	28
Acting dental surgeons, under contract	23
Army Nurse Corps	125
Hospital Corps	3,419
Civil employees	236
Total medical personnel	4,369

MEDICAL CORPS.

The Medical Corps is composed of the commissioned medical officers of the Regular Army.

Authorized strength June 30, 1913	445
In service June 30, 1912	414
Appointed during the year	22
Total	436
Losses during the year	12
In service June 30, 1913	424

On October 1, 1912, 26 candidates who had passed the preliminary examination for appointment in the Medical Corps reported at Washington to take the course of instruction at the Army Medical School. Twenty-four successfully completed the course of instruction at the school and were graduated May 31, 1913; 22 of the graduates were recommended for appointment in the Medical Corps of the Army. One student officer, owing to illness, was prevented from taking the full course at the school and was not graduated and given a commission, but was retained under his commission in the Medical Reserve Corps and will again be ordered to the school as a member of the next class for the purpose of completing the course.

Losses during the fiscal year.

	Colonels.	Lieutenant colonels.	Majors.	Captains.	First lieutenants.	Total.
Retired	4		1	1	1	7
Resigned				1	2	3
Discharged					1	1
Died				1		1
Aggregate	4		1	3	4	12

The death was Capt. Clarence A. Treuholtz, April 15, 1913.

PROMOTIONS DURING THE FISCAL YEAR.

The following promotions were made: Four lieutenant colonels to be colonels; 4 majors to be lieutenant colonels; 5 captains to be majors; 45 lieutenants to be captains.

The department has continued to hold preliminary examinations for appointment in the corps the second Monday in each month at San Francisco, Fort Sheridan, and Washington, D. C. During the fiscal year 24 applicants passed the preliminary examinations. Of this number 15 attended the session of the Army Medical School, which ended May 31, 1913, leaving 9 who will attend the next session of the school. A preliminary examination will be held on July 14, 1913, at various Army posts throughout the United States, to which 53 applicants have been invited.

Owing to the fact of the small number of vacancies now existing in the Medical Corps monthly examinations will no longer be held. It is proposed to convene boards at various posts throughout the United States in January and July. Candidates will be authorized to present themselves for examination at the points nearest their respective places of residence.

MEDICAL RESERVE CORPS.

On roster June 30, 1912		1,105
Appointed during the year		153
		1,258
Losses during the year:		
Resigned	21	
Discharged	5	
Died	4	
Commissions vacated by appointment to regular corps	23	
		53
On roster June 30, 1913		1,205

Of the 1,205 on roster June 30, 1913, 105 were on active duty and 1,100 on the inactive list.

On active list June 30, 1912		115
Ordered to active duty during the year		62
		177
Relieved from active duty	41	
Commissions vacated	23	
Honorably discharged	1	
Resigned	7	
		72
On active duty June 30, 1913		105

An officer of the Medical Reserve Corps residing in the vicinity of each military post has been designated as a locum tenens, and the policy has been adopted of calling such officer into active service for duty at his post when all the regular medical officers thereat are called upon to accompany troops into the field. When the Second Division was mobilized in February, 1913, the medical officers were thus enabled to promptly leave the posts with the troops, their places being filled in the manner indicated.

The medical service of the encampment of the veterans of the Union and Confederate Armies at Gettysburg devolved upon the Army, and it was necessary to supplement the regular Medical Corps to provide for the large number of men assembled at that camp. This was done by ordering 23 officers of the Medical Reserve Corps to active duty for a period of a few days, and having them report to the chief surgeon of the Gettysburg encampment on the 28th of June, which arrangement proved to be very satisfactory. It not infrequently happens that the services of a medical officer are required for a short period in an emergency when an officer of the regular corps is not available, and the emergency can be satisfactorily met by the temporary employment of an officer of the Reserve Corps. Should an emergency arise demanding a considerable number of medical officers in excess of those that could be furnished by the regular establishment, it is believed that the organized Reserve Corps would be a most valuable agency in providing the men without delay.

Great care has been exercised in the selection of the personnel of this organization, and many men of distinction in the medical profession are borne upon its rolls. Since few opportunities have thus far been afforded officers of the Medical Reserve Corps on the inactive list for duty with troops, they are consequently not as familiar as could be desired with the practical details of the specialties of military medicine. They are, however, coming more and more closely in touch with the officers of the regular Medical Corps by personal contact, by correspondence, and through medico-military publications, and in their enthusiasm are acquiring considerable theoretical knowledge along those lines. This makes it certain that when called into active service they would become efficient medical officers much more promptly than would a like number of men selected at random from the civilian medical profession.

It is obvious that a greater opportunity for the acquiring of practical knowledge by service with troops would still further enhance the value of this organization. This could be done to a certain extent by placing a limited number of men on duty for short periods at maneuver camps and camps of instruction. It could be done much more thoroughly by having a considerable number of them serve with the troops for a period of two years. To carry out this idea it is the policy of this office to have relieved from active service as rapidly as it can be done the older officers of the Reserve Corps who have acquired experience with troops, and to replace them by others from the inactive list, these in turn being replaced by others for a period of two years of active service.

CONTRACT SURGEONS.

In service June 30, 1912	11
Contracts made during the year	9
Total	20
Contracts annulled during the year	11
Contracts in force June 30, 1913	9

These contract surgeons are on duty at arsenals, remount depots, etc., at the rates of pay ranging from $75 to $150 per month.

DENTAL CORPS.

Number of dental surgeons in service June 30, 1912	28
Acting dental surgeons in service June 30, 1912	10
Appointed during the year	13
Total	51

The act of March 3, 1911, reorganizing the Dental Corps of the Army and providing for dental surgeons and acting dental surgeons on the basis of 1 per 1,000 with troops, created many vacancies in the Dental Corps, some of which have already been filled, but many still remain. Examinations are held twice yearly at various posts throughout the United States where duly qualified dentists are authorized to present themselves for examinations. Successful candidates are immediately given contracts and assigned to duty at military stations with the status of acting dental surgeons. Acting dental surgeons who serve satisfactorily for a period of three years are eligible for appointment as dental surgeons, and after passing a satisfactory examination will be commissioned with the rank of first lieutenants in the Dental Corps. Inasmuch as the full probationary period has not elapsed since the reorganization of the corps, no promotions have been made under the new scheme.

ARMY NURSE CORPS.

During the period covered by this report the authorized strength of the Army Nurse Corps has been 125. The corps has been kept filled to this limit and these figures represent the actual strength on the last day of the fiscal year 1913.

An increase of 25 nurses has been authorized, effective July 1, 1913, and it is believed that the vacancies thus created can be quite promptly filled from among the approved candidates who have applications on file.

The increase in the number of nurses available for assignment will enable this office to comply with the demand for additional nurses at stations which are now inadequately provided, and will provide for a slight extension of the service to other points. Thus far it has been impossible to station members of the Army Nurse Corps at any of the brigade posts where their services could be used with advantage.

If satisfactory accommodations can be obtained at Fort Leavenworth, it is proposed to send a small detachment to that post for duty.

During the year nurses have been on duty in the United States at the Walter Reed General Hospital, Takoma Park, D. C,; Army and Navy General Hospital, Hot Springs, Ark.; Army General Hospital, Fort Bayard, N. Mex.; the Letterman General Hospital, San Francisco, Cal., and the attending surgeon's office, Washington, D. C.; in the Hawaiian Department at the department hospital, Fort Shafter, Honolulu, and in the Philippines Department at the department hospital, Manila; Fort William McKinley, Rizal, and Pettit Barracks, Zamboanga.

During the fiscal year there have been made 36 new appointments and 8 reappointments; 39 nurses have been discharged. During the same time 549 applications have been received from graduated nurses for admission to the Army Nurse Corps.

Since the date of the last report the enlargement of the nurses' quarters at the Walter Reed General Hospital has been completed. Contracts have been made for the construction of the new quarters at the Letterman General Hospital, San Francisco, Cal., and the Army and Navy General Hospital, Hot Springs, Ark.

The enrolled nurses of the American Red Cross Nursing Service approaching 4,000 in number now constitute the reserve of the Army Nurse Corps, and in time of war or other emergency are with their own consent eligible for assignment to active duty in the military establishment.

HOSPITAL CORPS.

The authorized strength of the Hospital Corps is as follows:

Sergeants, first-class	300
Sergeants	362
Corporals	50
Privates, first-class, and privates	2,800
Total	3,512

The number of sergeants, first-class, is fixed by law, the total strength of the Hospital Corps and the number in the various other grades is determined by Executive order.

Strength at date of last report, June 30, 1912:	
Sergeants, first-class	262
Sergeants	341
Corporals	39
Acting cooks	200
Privates, first-class, and privates	2,654
Total	3,496
Gain July 1, 1912, to June 30, 1913:	
By enlistment and reenlistment	544
By transfer from the line, including unassigned recruits from depots	857
By return from desertion	93
Total	1,494
Loss during same period:	
By discharge, expiration of term of service	870
By discharge, by order	253
By discharge, certificate of disability	57
By discharge, sentence, general court martial	106
Transfer to the line	39
By retirement	21
By death due to disease	9
By death due to drowning, wounds, and other accidental causes	5
By desertion	210
Killed by guard	1
Total	1,571
Leaving in service June 30, 1913:	
Sergeants, first-class	295
Sergeants	336
Corporals	38
Acting cooks	190
Privates, first-class, and privates	2,560
Total	3,419

It will be observed that the Hospital Corps is over 2½ per cent below its authorized strength. It has been found impossible to keep this corps at its normal strength by enlistments, or by voluntary transfer from the line. On four occasions during the year requests have been made to The Adjutant General for the transfer of unassigned recruits from the various depots to fill vacancies, and these requests have been complied with in so far as practicable. About 225 men have been transferred to the corps as a result of this policy. It has not resulted, however, in obtaining the most desirable class of men for service with the sick.

The inspector general, Southern Department, in report dated June 4, 1913, remarks:

> The men transferred to the Hospital Corps from the line are reported to be an inferior grade of men not wanted in the line. A way to avoid this situation is to "enlist directly for the Hospital Corps."

The impracticability of obtaining men as proposed by the inspector general, Southern Department, has been shown above.

Commenting on the remarks of the inspector general, the commanding general of the Southern Department says:

> If the pay of the Hospital Corps is sufficient to attract desirable men, transfer from the line is believed to be the best method of obtaining suitable men.

The fact that the pay is not sufficient to attract the best class of men is shown elsewhere in this report.

Examinations were held in the departments and at independent stations during the year for promotion to the grade of sergeant, and 137 were advanced to this grade. Of this number 15 had served in the same grade. At present there is a shortage in this grade of noncommissioned officers, and it has been necessary to instruct the department surgeons to hold special examinations to secure eligibles for promotion.

On June 18, 1913, the Secretary of War authorized 12 additional sergeants for duty with the Organized Militia, the strength of the Hospital Corps being increased to that extent. The names of 8 of these noncommissioned officers have been submitted for these assignments. The 4 still required for this duty will be designated as soon as men become available as a result of the examination now being held.

The Eastern Department was called upon to send Hospital Corps personnel to Gettysburg, Pa., for duty at camp of Civil War veterans at that place. It was also necessary to send Field Hospital No. 1, Fort D. A. Russell, Wyo., to this camp for duty.

The Eastern Department was also called upon to furnish personnel for duty in the Ohio Valley and Vicksburg flood districts during the disastrous floods of March, 1913.

When the Second Division was concentrated in Texas in February, 1913, a considerable proportion of the Hospital Corps personnel of the Central Department accompanied the line organizations from the various posts to the point of concentration, and have since remained on duty with the division. Field Hospital No. 3 and Ambulance Company No. 3 also accompanied the division. The Medical Department personnel for the transports assembled at Galveston was furnished from the Eastern Department.

The authorized strength of the Hospital Corps (3,512) is inadequate for the needs of the service, and does not provide the number of men prescribed by Army Regulations for duty with the Army as now constituted. When the allowance of 3,500 men was fixed for the Hospital Corps, the strength of the Army was less than 76,000. Its present authorized strength, exclusive of Hospital Corps and Philippine Scouts, is about 84,810, and a corresponding increase in the Hospital Corps would bring that organization up to 3,905.

It has been assumed that when the troops of a garrisoned station take the field, the entire Hospital Corps detachment at the post is immediately available to accompany it; such is not the case, as there invariably remain behind not only the enlisted sick, but the families of officers and enlisted men in numbers sufficient to demand that a working hospital be maintained.

As previously stated in this report, it has been impossible to keep the Hospital Corps filled up to its authorized strength by enlistment and reenlistment, and there has been a constant drain upon it by the transfer of desirable men to the line and to other staff corps. This is interpreted to mean that the relative desirability of service in the Hospital Corps has lessened since the organization of the corps.

In his annual report for the fiscal year 1911–12, the commanding general, Central Division, alludes to this condition of affairs in the following terms:

> The discipline and work of the Hospital Corps has been excellent. There has been some difficulty in keeping the detachments up to their authorized maximum strength, as the Hospital Corps does not offer sufficient inducements to make men desire to transfer to it from the line.

When the Hospital Corps was organized in 1887, it was recognized that its members would be required to do work that was not attractive to enlisted men and which required special qualifications. To secure a suitable class of men to do such work, noncommissioned officers of the Hospital Corps were given pay considerably in excess of most noncommissioned officers of the line. At a later date the pay of privates was likewise proportionately increased. This principle was lost sight of in the legislation of 1908, when the pay of the line soldier was increased. In the meantime special grades of noncommissioned officers have been made in other branches of the service and various ratings established whereby the opportunities for promotion of intelligent men have been increased and opportunities for a substantial increase of pay have been provided. Opportunities for extra-duty pay are provided in other branches of the service, but are denied to the Hospital Corps soldier.

Bills are now pending in Congress which provide the following grades and rates of pay for the Hospital Corps:

Sergeants major (new grade) 30, at $75 per month, with the increased pay for service as now authorized for sergeants, first class.

Sergeants, first class, 300, pay to be increased from $50 to $65 per month.

Sergeants, pay to be increased from $30 to $36 per month.

Corporals, $24 per month (no increase).

Privates, first class, pay to be increased from $18 to $21 per month.

Privates, $16 per month (no increase).

These bills were proposed and introduced without any prompting on the part of this office, but are in accordance with its ideas, and it is believed that if the measure were given the support of the Secretary of War it would become a law.

Such a law would undoubtedly be for the benefit of the service by increasing the desirability of the Hospital Corps and attracting thereto a better class of men; and the additional higher grade contemplated would provide a more adequate compensation for a limited number of specially skilled men, such as pharmacists of exceptional ability, X-ray experts, anesthetists, and others of a class who can now command in civil life a higher rate of pay than is afforded them in the service.

In our service field hospitals and ambulance companies are an outgrowth of the Hospital Corps companies of instruction. In all modern armies such organizations form most important integers of the mobile army.

To date four field hospitals and ambulance companies have been organized for the entire United States Army—a number just sufficient to equip one Infantry division on the basis allowed by Field Service Regulations.

Geographically these organizations are located as follows:

In the Philippine Department, of each	1
In the Western Department, of each	1
In the Central Department, of each	2

Field Hospital No. 1, from the Central Department, is now on detached service at Gettysburg, in the Eastern Department, and Field Hospital No. 3 and Ambulance Company No. 3, from the same department, are with the Second Division at Texas City, Tex. It will thus be observed that there is neither a field hospital or ambulance company which belongs in the Eastern, Southern, or in the Hawaiian Departments. Recently, when it became necessary to provide two field hospitals for service at the veteran encampment at Gettysburg, the emergency had to be met by the transfer of Field Hospital No. 1 from Fort D. A. Russell, Wyo., and the organization of a second provisional hospital, de novo, from the Medical Department personnel of the Eastern Department. To get this in shape for service required about six weeks of time, even though its personnel was furnished by trained Hospital Corps men.

The tactical assignments of the four field hospitals and four ambulance companies are as follows: To the Second Division, one of each; to the Third Division, one of each; to the Cavalry Division, one of each; with troops in Philippine Islands, one of each.

It will thus be seen that the First Division has no field hospital or ambulance company attached to it or stationed within the limits of the territory which it occupies. When one of these organizations is needed for duty—as in the case of field hospitals for the Gettysburg encampment—the alternative is presented of organizing a provisional unit or of bringing one more than half way across the continent. In the instance under consideration it was necessary to doboth. In passing, it might be remarked that in consequence of the Second Division having only one field hospital and one ambulance company of its own, the organizations belonging to the Cavalry Division had been made subject to the orders of the commanding general of the mobilized divisions, whose authority was obtained before it could be used for service in the Eastern Department. In other words, in consequence of the deficient number of such organizations a field hospital belonging to one division is on duty with a second and is subject to the orders of the commanding general of a third. In the event of war, the unpreparedness of the Medical Department in this direction would be a matter of very serious moment and would invite disaster. This office desires to call attention to this, and to go on record as having done so, in order that it may be absolved from responsibility in the event of any breakdown due to a deficiency in the number of these important organizations.

I recommend that steps be taken with the least practicable delay to organize and equip two field hospitals and two ambulance companies for each of the tactical divisions and for the Philippine Department, and one of each of the organizations for the Hawaiian Department, and that the authorized strength of the Hospital Corps be increased by the number of noncommissioned officers and privates necessary to man the proposed organizations. I further recommend that such a procedure be considered as a preliminary and emergency measure, and that eventually each tactical division be provided with mobile sanitary units on the basis prescribed by Field Service Regulations.

In consideration of the special functions of the mobile organizations, there is required for duty with them a certain number of men having qualifications different from those generally required for Hospital Corps soldiers. I therefore recommend that there be allowed for each ambulance company 1 horseshoer at $30 per month, and 1 farrier, 1 saddler, and 15 wagoners, each at $21 per month; and for each field hospital 1 artificer and 8 wagoners, each at $21 per month.

PROPOSED VETERINARY CORPS.

One or more bills have been introduced in Congress during the last year to increase the efficiency of the veterinary service of the Army. This office has recommended that this service be organized as a corps and attached to the Medical Department, in a manner similar to the Nurse Corps and Hospital Corps. This is not proposed for the aggrandizement of the Medical Department, but because it is believed to be the only way in which that service can be raised to a fitting plane of dignity and efficiency such as it has reached in European countries and in the armies of the great military nations.

Veterinary medicine is a learned profession with a voluminous periodical and permanent literature of its own. The therapeutics and pharmacy of veterinary medicine are largely the same as for the medical service, and in Europe, where veterinary medicine has the dignity and standing of a learned profession, it has made valuable contributions to our knowledge of the causation of diseases. It is believed that it can not be placed on a high standard of efficiency without long-continued application of the same agencies which have raised the Medical Corps of the Army to its present high standard. This would not only conduce to the elevation and efficiency of the veterinary service, but would also be in the interest of economy, as all its supplies could be most advantageously purchased, cared for, and issued through the machinery of the Medical Department.

ARMY MEDICAL SCHOOL.

[Commandant, Col. Charles Richard, Medical Corps, United States Army; secretary, Maj. Carl R. Darnall, Medical Corps, United States Army.]

Col. Louis A. La Garde, Medical Corps, United States Army, was relieved as instructor in military surgery July 3, 1912, and as commandant October 1, 1912, by Col. Charles Richard, Medical Corps, United States Army.

The seventeenth session of the school began October 1, 1912, and ended May 31, 1913. The number of accepted candidates appointed in the Medical Reserve Corps and admitted to the school was 26. No student-candidate failed to pass the mid-term examination; 24 completed the course and qualified in the final examination; of this number 22 were recommended for commission in the Medical Corps of the Army, and 2 failed to receive such recommendation because of deficiency in aptitude for the military service; 2 failed to pass the final examination.

No officers of the Organized Militia were given permission to attend the course during the session.

The course of instruction has varied but little from that of last year. The following table shows the subjects taught, the number of hours devoted to each, names of the instructors, and the value of the several subjects.

No.	Subject.	Hours of instruction.	Professor.	Maximum.	Minimum.
1	Medical Department administration, duties of medical officers, and customs of the service.	96	Maj. Chas. R. Reynolds	1,000	800
2	Clinical microscopy and bacteriology.	268	Maj. F. F. Russell; assistants, Capt. C. F. Craig, Capt. H. J. Nichols.	900	720
3	Military hygiene	21	Lieut. Col. F. A. Winter	800	640
4	Military surgery	24	Col. Charles Richard	800	640
5	Military and tropical medicine	18	Lieut. Col. W. D. McCaw	800	640
6	Sanitary chemistry	150	Maj. C. R. Darnall	600	480
7	Hospital Corps drill	48	Capt. W. A. Wickline	500	400
8	Operative surgery	17	Capt. A. C. Christie	400	320
9	Opthalmology and optometry	43	Maj. P. S. Halloran; assistant, Capt. Wm. T. Davis.	400	320
10	Radiography	26	Capt. A. C. Christie	300	240

In addition to the above the following instruction was given: Series of eight lectures on military law by Maj. Blanton Winship, Medical Corps; a series of lectures and clinical demonstrations in psychiatrics at the Government Hospital for the Insane by Dr. J. S. White and Capt. Edgar King, Medical Corps; 22 hours in equitation at Fort Myer, Va.

The closing exercises were held in the lecture room of the school, at 10 o'clock a. m., Saturday, May 31, 1913. The graduating class was addressed by First Lieut. Charles W. Richardson, Medical

Reserve Corps, United States Army, of Washington, D. C. The diplomas were presented by the Hon. Henry S. Breckinridge, Assistant Secretary of War. The Sternberg medal, founded by First Lieut. Richard Slee, Medical Reserve Corps, United States Army, of Swiftwater, Pa., in honor of Brig. Gen. George M. Sternberg, United States Army, retired, to be awarded to the graduate officer with the best term record in practical knowledge of the subjects of bacteriology and serum therapy, was presented, with appropriate remarks, to First Lieut. George R. Callender, Medical Reserve Corps, United States Army, by Gen. Sternberg in person. Col. John Van R. Hoff, United States Army, retired, presented the Hoff memorial medal to First Lieut. Benjamin B. Warriner, Medical Reserve Corps, United States Army, who had the highest average received for the year.

The course in military surgery consisted of didactic lectures on gunshot, sword, saber, and bayonet wounds. It embraced the mechanics of projectiles; the different kinds of projectiles used in modern warfare, and the character of injuries produced by them; the action of explosives on tissues; the treatment of wounds in general and wounds of special parts; etiology, signs, symptoms, and treatment of traumatic aneurisms; and varieties of wounds produced by cutting and puncturing weapons, and their treatment. These lectures were illustrated by lantern slides, skiagraphs, and experimental gunshot wounds on the cadaver.

Sanitary chemistry, which was almost entirely a practical laboratory course, consisted of, first, qualitative analyses of the different groups of metals, with a view of refreshing the chemical knowledge of the student-candidates, and of familiarizing them in laboratory technique. Following this, the course consisted of examination of stomach contents, quantitative and qualitative examinations for the commoner poisons and alkaloids; chemical analysis of urine; chemical analysis of water; examination of air; the determination of the purity of pharmacopœal substances (the mineral salts, alcohol, chloroform, ether, calcium, magnesium sulphate, potassium bromide, potassium iodide, quinine sulphate, sodium salicylate), and examination of foods (flour, milk, butter, vinegar).

The course on bacteriology and clinical microscopy was expanded in several respects. Additional time was devoted by the class to the courses on syphilis and protozoology referred to in last year's report. The course in bacteriology and clinical diagnosis covered the standard work usually undertaken in post-graduate schools, and in addition included complete studies of cholera, typhoid fever, and plague. These subjects are not only important in themselves, but afford opportunity for the demonstration of the greater number of technical procedures of bacteriology and serology. In the study of typhoid and allied fevers, a course necessitating 12 working days was given, which included the isolation of the paratyphoid bacilli, as well as the typhoid, from blood, urine, and feces. The course in bubonic plague was more complete than has heretofore been given, and included the demonstration of acute lesions in freshly infected animals and tissues, and stained smears from natural infections in man and animals.

To illustrate actinomycosis a classical case was exhibited and from it the students prepared successfully stained smears and cultures. Rabies was illustrated with material from a fresh human case, as well as by typical symptoms and lesions in animals.

The subject of bacterial vaccines was studied during four working days. In addition to lectures and demonstrations on the immunity reactions involved, the therapeutic use of vaccines in various diseases was considered and each student prepared a staphylococcus vaccine.

At the conclusion of the course two weeks were devoted to the diseases caused by the anaërobic bacteria, and most of the methods which have been successfully used in the study of anaërobes were demonstrated to or were used by the class.

The first 16 hours of the course in opthalmology were devoted to theoretical instruction. The remaining 27 hours were made as practical as possible.

A series of interesting and very instructive lectures were delivered by special professors, session 1912–13, as follows: "Surgery of the bones," "Surgery of the brain," and "Cancer," by First Lieut. Roswell Park, Medical Reserve Corps, United States Army, of Buffalo, N. Y., three lectures; "The chronic arthritides," by First Lieut. Frank Billings, Medical Reserve Corps, United States Army, of Chicago, Ill., three lectures; "Surgery of the chest," by First Lieut. Samuel Lloyd, Medical Reserve Corps, United States Army, of New York, N. Y., four lectures; "Surgery of the bones and joints," by First Lieut. John B. Murphy, Medical Reserve Corps, United States Army, of Chicago, Ill., one lecture.

One officer of the Medical Corps, United States Army, attended the school during the session for a special course of instruction in serology and special bacteriology, preparatory to taking charge of one of the department laboratories. One medical officer of the Organized Militia took a special course of instruction in serodiagnosis, preparation of vaccines, etc. His work was highly satisfactory in all respects, and the experience gained will no doubt be of benefit to the military service of his State.

The Hospital Corps men (2 sergeants, first class, 1 sergeant, and 1 private) detailed at the school for instruction in X-ray work and photography, have proven apt and have acquired the technical knowledge and skill necessary to qualify them as instructors in these subjects.

Believing that the faculty of the school should be given titles commensurate with the character and importance of their duties, it was recommended, during the session, that titles of "instructor" and "assistant instructor," previously held, be changed to "professor" and "assistant professor," and that the distinguished members of the Medical Reserve Corps, detailed to deliver lectures upon professional subjects before the students of the school, be given the title of "special professor" for the session during which the lectures are delivered. This recommendation having been approved by the Secretary of War, the change was effected on January 25, 1913.

Relative proficiency of student candidates, Army Medical School, session 1912–13.

	Final rating.	Aggregate (maximum, 7,000; minimum, 5,600).	Remarks.
First lieutenants, Medical Reserve Corps:			
Clarence R. Bell	17	5,955	Proficient.
Raymond W. Bliss	15	6,004	Do.
William B. Borden	18	5,951	Do.
Raymond C. Bull	12	6,028	Do.
George R. Callender	3	6,303	Proficient with honor; Sternberg medalist.
Sidney L. Chappell	4	6,301	Proficient with honor.
Royal E. Cummings	19	5,924	Proficient.
Harry L. Dale	9	6,168	Do.
Bertram F. Duckwall	16	5,999	Do.
Robert H. Duenner	20	5,918	Do.
John S. C. Fielden, jr	23	5,850	Do.
Edward R. Guinan	21	5,903	Do.
Halbert P. Harris	22	5,852	Do.
William D. Herbert	7	6,227	Do.
Charles C. Hillman	6	6,230	Do.
Oliver Kinsey, jr	25	5,452	Not proficient.
Norman T. Kirk	13	6,018	Proficient.
George F. Lull	2	6,307	Proficient with honor.
Ernest C. McCulloch	11	6,126	Proficient.
Fletcher O. McFarland	10	6,141	Do.
John S. Saurman	24	5,729	Do.
Alvin W. Schoenleber	14	6,015	Do.
Stephen H. Smith	5	6,275	Do.
Benjamin B. Warriner	1	6,401	Proficient with honor; Hoff medalist.
Edward T. B. Weidner	8	6,183	Proficient.
Leon M. Wilbor	26	5,405	Not proficient.

SPECIAL WORK OF MEDICAL OFFICERS.

FLOOD RELIEF WORK, 1913.

During the disastrous flood which occurred in the Ohio and Mississippi Valleys, beginning in March, 1913, Maj. P. C. Fauntleroy, Medical Corps, was directed by the Secretary of War to proceed to Columbus, Ohio, and take charge of the medical relief work in Ohio. In compliance with this order Maj. Fauntleroy proceeded to Columbus and reported to the governor of Ohio. Owing to the delay caused by the great destruction of railroads he did not reach Columbus until March 30, having left Washington on March 26. The following medical officers were ordered to report to him for duty in connection with the relief work:

Maj. William T. Lyster.
Maj. Sandford H. Wadhams.
Maj. Paul C. Hutton.
Capt. George P. Peed.
Capt. John A. Clark.
Capt. John R. Bosley.
Capt. Arthur M. Whaley.
Capt. John S. Lambie.
Capt. Morrison C. Stayer.
First Lieut. Edward C. Register.

Ten noncommissioned officers and 40 privates of the Hospital Corps were also orderd to report to him at Columbus. Owing to the destruction of the railroads, only Maj. Wadhams and Capts. Clark and Bosley, and Lieut. Register, 2 noncommissioned officers, and 4 privates, Hospital Corps, were able to report to Maj. Fauntleroy at Columbus. The other officers and men reached Dayton and by order of the Secretary of War were put on duty with Maj. Rhoads, Medical Corps, as stated below. The following supplies were furnished Maj. Fauntleroy by the Medical Department for the relief work: Two field hospitals, reserve medical and surgical supplies sufficient for 20,000 men for one month, 10,000 vaccine points, sufficient antityphoid prophylactic to immunize 25,000 men, 10,000 units diphtheria antitoxin, and 60 cubic centimeters meningitis serum.

Upon arrival at Columbus, Maj. Fauntleroy was directed by the governor to confer with the authorities of the Ohio National Guard, and especially with Lieut. Col. Hall, surgeon general, Ohio National Guard. He also conferred with the city health officer and with the secretary of the State board of health. Much valuable information was obtained from these sources relative to prevailing epidemics, etc. Throughout his stay he continued to work in conjunction with the regularly constituted health authorities of the State. He reported:

> From my conference with Lieut. Col. Hall I found that there was no reliable information as to the conditions in the valleys of the Miami, Scioto, Muskingum, and Ohio Rivers. Owing to the destruction of the means of communication the reports from the

flooded districts were mere hearsay rumors, and consequently the conditions were greatly exaggerated, especially as to loss of life and medical needs. I suggested to Lieut. Col. Hall that we should send medical officers at once to make medical surveys of these valleys and to report conditions and needs promptly in order that these could be met systematically and economically. From the State health officer I ascertained that widespread epidemics of smallpox, typhoid fever, and meningitis had been going on in the towns and cities along these rivers. Majs. P. C. Hutton, S. H. Wadhams, Capt. J. R. Bosley, and Lieut. E. C. Register, all of the Medical Corps, United States Army, were detailed for the purpose of making these medical surveys. These officers were supplied with the prophylactic vaccines and sera against the infectious diseases known to be in the districts they were about to visit. They were instructed to get in touch with the mayors, health officers, and local relief committees in the different municipalities; to work through them, ascertaining the conditions and medical needs of each locality, and offering their services in formulating systems of relief, and the prophylactics necessary to combat any epidemic diseases present or feared, also to promptly report to me the medical needs which they were unable to supply, the kind and quantity and the necessity therefor.

Lieut. Col. Hall, surgeon general, Ohio National Guard, detailed some of his medical officers for similar work, and with the same instructions. The work of all these medical officers was excellent, thorough, and expeditiously performed. In consequence, reliable information of the condition of the flooded districts began to arrive soon after their departure, and the needs of the people were satisfactorily met without undue waste. The needs reported were met either from the United States Army supplies, which I had at Columbus, or by purchase by Lieut. Col. Hall, or by the National Red Cross Association, in charge of Mr. Bicknel, or the Ohio flood relief committee. The correlating of these relief agencies in meeting the medical needs of the flooded districts as reported to me was done without any friction and enabled the work to be done with the utmost speed.

A field hospital was turned over to the surgeon general, Ohio National Guard, to be erected and operated by his officers at Portsmouth. Sufficient vaccine virus, antityphoid vaccine, and antimeningococcic were furnished to many places throughout Ohio to meet the immediate needs. Medical and surgical supplies were furnished wherever requested by the surgeon general, Ohio National Guard.

After completing the work of survey in Ohio, Majs. Hutton and Wadhams, and Capt. Bosley and Lieut. Register and three sergeants accompanied Maj. Normoyle down the Mississippi as far as Vicksburg for the purpose of doing similar work along that river. The remainder of the Medical Department personnel not needed elsewhere remained in Dayton.

The medical officers on duty with the troops from Columbus Barracks in the flooded section of the city cooperated with me and put into operation most satisfactorily the necessary sanitary measures to meet the conditions in the section under the supervision of Col. G. A. Dodd, United States Army. Too much can not be said in praise of the prompt, thorough, and continuous work done by Col. Dodd and his command in meeting the needs of the people of the flooded section of Columbus.

On April 24, Maj. Fauntleroy received a letter from the governor of Ohio, relieving him from duty with the relief work and expressing his appreciation of the services rendered by him and his assistants.

The Secretary of War, accompanied by the Chief of Staff and other officers from the War Department, visited Dayton, Ohio, on March 20, 1913, and while there directed Maj. Thomas L. Rhoads, Medical Corps, to take charge of the sanitary situation in the city under the following order:

> The governor of Ohio having requested the Secretary of War to take charge of the sanitary situation in the city of Dayton, Ohio, and immediate vicinity, Maj. Thomas L. Rhoads is hereby designated as chief sanitary officer in charge of the conduct of the necessary work under the general instructions which are given him.

Maj. Rhoads divided the city into 16 sanitary districts and took charge of the relief work and cleaning up of the city, working in conjunction with the National Guard, Red Cross, and citizens' relief committee.

A relief camp was established by him on the fair grounds on March 31 and remained in operation until April 15, the average daily number of refugees at the camp being 208, the average daily number fed 262. As stated above, the medical officers on duty with Maj. Rhoads were: Maj. Paul C. Hutton, Capt. John A. Clark, Capt. George P. Peed, Capt. Arthur M. Whaley, Capt. John S. Lambie, jr., Capt. Morrison C. Stayer. There were also 7 sergeants, 3 corporals, and 36 privates of the Hospital Corps.

Maj. Rhoads performed his difficult and responsible duties with energy and efficiency. He was relieved on April 25.

THE CARE OF MEXICAN WOUNDED BY MEDICAL OFFICERS AND HOSPITAL CORPS MEN, UNITED STATES ARMY.

Maj. W. R. Eastman, Medical Corps, reported on December 28, 1912, that 22 Mexican Federals and 10 Mexican insurgents, wounded at Palomas, Mexico, November 21, 1912, were treated at Columbus, N. Mex., from November 23 to December 4, 1912, by him with the assistance of Capt. W. L. Hart, Medical Corps, Dr. Ellard (local practitioner), Sergt. Raymond, Hospital Corps, and six privates, first class, and privates, Hospital Corps. He stated that:

> The majority of the cases were fearfully infected. All the wounds were treated with tincture of iodin and through and through irrigations of weak solution of iodin and normal salt used whenever possible with external drainage. All improved under careful and tedious treatment, except Nos. 6 and 12, which were hopeless from the beginning.
>
> The 30 survivors were transferred, on December 4, 1912, by order of the commanding general, patrol district of El Paso, Fort Bliss, Tex., the Federals to the military hospital, Juarez, Mexico, and the rebels to the Hotel Dieu, El Paso, Tex.

The Mexican Federal forces on March 15, 1913, attacked the position of the insurgent forces on the hills 4 miles east of Naco, Mexico, about one-half mile from the international line. On April 8 and April 13, 1913, general attacks were made by the Mexican insurgents on the Federals occupying the town of Naco, Mexico. Maj. Louis Brechemin, Medical Corps, on April 5 notified the commanding officers of both forces that assistance would be furnished the wounded, if desired. Medical officers, Hospital Corps men, and hospital equipment from camps in the vicinity were assembled at Naco, Ariz., at the suggestion of Maj. Brechemin. A hospital was established on the first floor of the opera house in Naco, Ariz. Ambulances and searching parties were sent out after both attacks. Most of the wounded, however, were brought over either by American civilians, by Mexicans, or reached the hospital unassisted.

One hundred and fourteen wounded received assistance at the hospital established. Of this number 40 were Federals, 70 were insurgents, and in 4 cases the side was not stated.

Maj. Brechemin was assisted by Capt. Worthington, Lieuts. Van Kirk, and Ingold, Medical Corps, Dr. Randall of Douglas, Ariz., 2 other civilian physicians (names not given), 2 sergeants and 9 privates, and privates first class, Hospital Corps. Col. Guilfoyle, Ninth Cavalry, detailed extra men from the troops to assist at the hospital, and rendered assistance in every other way possible. The medical supplies, dressings, most of the bedding, and food for the patients while in hospital were supplied by the United States Government. Mr. Greenway and Dr. Ricketts, American civilians, donated 50 spring cots and several bales of quilts, as well as many other articles which could not otherwise be procured.

Maj. Brechemin says:

> The work of the medical officers left nothing to be desired. They exercised splendid judgment and their surgical work was excellently performed. I desire to especially commend them for their zeal and energy and the way they took hold of the situation.
>
> The detachment of the Hospital Corps here is made up of men recently transferred from the line and some recruits. In spite of this fact their work was gratifying in the extreme. They were on duty long hours and the work was hard, but they took hold quickly and were alive to the situation. None of the patients were neglected for a single instant by the Hospital Corps men.

Six deaths occurred among the wounded treated. The wounded having been disposed of by turning them over to the proper authorities, the hospital was closed on April 23.

The following quotations from Maj. Brechemin's report is inserted, as a matter of general interest:

> April 8: The insurgent forces made a general attack on Naco, Sonora, commencing at daylight. The firing was continuous and heavy. The Ninth Cavalry camp, notwithstanding the fact that it was protected by lines of loaded freight cars was under a heavy fire. One trooper was wounded in the shoulder by Mauser bullet and one teamster shot through wrist and thigh. The camp hospital, which had been placed in a small hollow behind cars, was subject to rifle fire and had to be vacated. The dressings and litters were removed to railroad embankment.
>
> April 13: The attack commenced at 3.30 a. m., with heavy firing on both sides. The hospital was under fire and bullets struck the building but did no damage. At 4 a. m., wounded began to arrive at hospital brought in by patrols and machines belonging to Sheriff Wheeler and others. The first man to arrive at hospital was a Federal officer shot in the neck, followed by a lieutenant of the insurgent forces, who had been wounded in the thigh. A few minutes later a Yaqui came in severely wounded by a hand grenade. From then on the wounded came in a steady stream.

PLAGUE IN PORTO RICO.

When bubonic plague was reported in June, 1912, in San Juan, P. R., at the urgent request of the Chief of the Bureau of Insular Affairs, the Secretary of War issued an order for Lieut. Col. J. R. Kean as epidemilogical, and Maj. F. F. Russell as laboratory expert, with First Lieut. F. H. Foucar as assistant (all of the Medical Corps, United States Army), with the necessary assistant, to proceed to San Juan for special duty. The urgent necessity of limiting the spread of this epidemic by early, prompt, efficient measures was recognized. Lieut. Col. Kean reported in part as follows:

> Having been authorized by the Secretary to take the necessary personnel and equipment to establish a plague laboratory, I sailed from New York June 22, accompanied by Maj. F. F. Russell and Lieut. F. H. Foucar, Medical Corps; three enlisted men of the Hospital Corps, and a regulation field laboratory outfit. We arrived June 27. We spent the 27th and 28th inspecting the localities where plague had appeared, and in observing the measures which were being put into operation for its suppression. There had been up to the time of our arrival 22 cases of human plague—

San Juan (old city)	2
Puerta de Tierra	16
Santurce	3
Caroline	1
	22

> But little was known as to the distribution of the plague among the rat population until the plague laboratory had been a week in operation.
>
> A building had already been selected and cleaned out for use as a laboratory, but the putting in of the water supply and especially the fly-proof screening which is essential in such dangerous work delayed its occupation until the 29th, when Maj. Russell moved in and immediately began work. A beginning in the examination of rats had been made by Dr. Gomez Martinez, chief of the laboratory of the sanitary

department, who up to the time of the establishment of Russell's plague laboratory had examined 284 rats, of which 15 were found infected. Unfortunately the importance of examination of all rats obtainable, in order to determine the degree of prevalence of the disease among them and its accurate distribution, was not appreciated, and only sample lots of those killed were furnished to the laboratory, and no spot map of those found infected was made. This neglect to send to the plague laboratory the bodies of rats caught and killed persisted to a considerable degree up to the time of our departure in spite of our efforts to impress upon the various officials of the sanitary department and the populace generally the importance of sending rats to the laboratory with tags marking the place where caught. This was true of the quarantine service also; of the large number of rats killed by fumigation on board vessels in the harbor very few reaching the laboratory.

A large number of rats were examined and much valuable information obtained relative to the distribution of the epidemic among the rodents. A sanitary survey of San Juan and the neighboring town was made by Lieut. Col. Kean. Daily conferences were held with the acting governor, the director of sanitation, and Dr. Creel, of the public health service. Dr. Creel, who had had experience in plague work in San Francisco, and who was well qualified to take charge of the special plague work, assumed charge after some days. The laboratory established by Maj. Russell, with its equipment, was turned over to Dr. Creel's assistants on July 9. The work then being well started, and there being no necessity for the medical officers to remain longer, they returned to their proper station. The anti-plague work was successfully completed by Dr. Creel.

WORK OF MAJ. CLYDE S. FORD, MEDICAL CORPS, AT CONSTANTINOPLE IN CONNECTION WITH THE AMERICAN RED CROSS DURING THE BALKAN WAR.

When the Balkan War began Maj. Ford was in Paris on sick leave. He left that city on November 1, 1912, for Constantinople, arriving there on November 4. He was immediately placed in charge by the American Red Cross of a field hospital which he improvised and organized in connection with the Turkish hospital. He assumed professional charge of two wards with 60 beds each, and three days after his arrival in Constantinople he began the professional care of 120 wounded Turkish soldiers.

On December 4, 1912, Maj. Ford was directed by the War Department to report to the American ambassador at Constantinople for such duty as he might direct, and upon the completion of the duty assigned to revert to his status of sick leave. He remained in charge of this hospital work until the latter part of the summer of 1913. He incidentally made an inspection of the cholera situation at San Stefano on November 18. As the result of this inspection he returned to San Stefano on November 23 with a small party under the direction of the American Red Cross and took charge of the sanitary work in a cholera camp containing about 600 sick soldiers. With the exception of a few days required in Constantinople to supervise the work which was under his direction there, he was occupied with this work in cholera camps until December 9, when it was formally turned over to the British Red Crescent Society. After two months of regular professional work, Maj. Ford then took charge of a very important piece of work, but one which he described as uninviting, pain, and inglorious. The work referred to was the establishing, financing, and operating of the general hospital laundry for a large Turkish hospital. He states that all the hospital linen from the wards and storeroom had passed into a large and unspeakably dirty pile of some 15,000 pieces. As there was no one who seemed either able or inclined to relieve this unhappy and unsanitary state of affairs, he volunteered to assume charge of the work. This office has been informed through several sources of the unselfish and generous work performed voluntarily by Maj. Ford.

OBSERVATIONS BY MAJ. P. C. FAUNTLEROY, MEDICAL CORPS, UNITED STATES ARMY, IN THE BALKANS.

In accordance with the directions of the Secretary of War of November 23, 1912, Maj. P. C. Fauntleroy, Medical Corps, left Washington on November 24 for the seat of the war in the Balkans.

He went to Vienna, thence to Sofia, Bulgaria. He made careful observations of the work of the medical department there, and then proceeded as near the field of actual hostilities as the authorities would allow him. After completing these observations he went to Constantinople, where the work of the Turkish medical department, with the Associated Red Crescent and Red Cross Societies, was carefully observed. Several very valuable and interesting reports giving in detail the results of his extended observations were furnished the War Department by him. He returned to Washington February 14, 1913.

STUDIES IN PELLAGRA.

Through the instrumentality of Dr. George N. Miller, then president of the New York Post-Graduate Medical School, funds were donated by Col. Robert M. Thompson, of New York City, and Mr. J. H. McFadden, of Philadelphia, to support a research expedition for the investigation of pellagra in the United States to be sent out under the auspices of the New York Post-Graduate School. Capt. J. F. Siler, Medical Corps, United States Army, was the representative of the Medical Corps of the Army on the commission which was formed. A field headquarters was established in the South at Spartanburg, S. C., early in June, 1912, and field studies were continued until October 15, 1912. Several hundred cases were very carefully studied and the statistics very carefully compiled. When the field service was discontinued the work of the regular commission was continued in the laboratories of the New York Post-Graduate Medical School. The report of "An Intensive Study of the Epidemiology of Pellagra" was published in the American Journal of Medical Sciences, June and July, 1913.

Additional funds have been donated, and further work will be done by the commission. Many valuable and interesting points in the epidemiology of this disease have been brought out by the commission.

FLOOD RELIEF WORK, 1912.

During the overflow of the Mississippi River in May and June, 1912, Maj. R. B. Miller and Capt. J. M. Coffin, Medical Corps, were detailed for duty with the relief force of the United States Army. Excellent work was done by both of these officers. A sanitary inspection for the Red Cross was made of the refugee camps, of the flooded region, by Lieut. Col. J. R. Kean, Medical Corps, under orders from the Secretary of War.

THE MILITARY SHOE—MUNSON.

A book on "The Soldier's Foot and the Military Shoe," by Maj. E. L. Munson, Medical Corps, with the approval of the War Department, was published in 1912. Maj. Munson was president of the Army Shoe Board, which conducted a series of experiments lasting over four years and included the critical study of the feet of some 2,000 soldiers, together with the fitting of many thousand shoes. This book embodies the experience of Maj. Munson himself and the shoe board. Its purpose is to supply practical information on the subject, and it should be carefully studied by all whose duties require them to either fit or supervise the fitting of shoes in the Army.

ARTICLES BY MEDICAL OFFICERS.

Articles by medical officers of the Army approved for publication by the Surgeon General's Office, July 1, 1912, to June 30, 1913.

Author.	Article.	Published in—
Ashburn, Maj. P. M.	See Board for the Study of Tropical Diseases.	
Ashford, Maj. Bailey K.	The economic aspect of hookworm disease in Porto Rico.	Read before the International Congress on Hygiene and Demography, September, 1912; printed in S. G. O. Bulletin No. 2.
	Control and eradication of hookworm disease.	Do.
	Remarks on the clinical study of uncinariasis and its treatment.	Medical Notes and Queries, 1913.
	Notes on sprue in Porto Rico and the results of treatment by yellow santonin.	Official organ of the American Society of Tropical Medicine.
Ashford, Capt. Mahlon	A study of the diagnosis tag.	The Military Surgeon, October, 1912.
Banister, Lieut. Col. W. B.	The Medical Reserve Corps, its duties and relations to the Army in peace and war.	The Military Surgeon, March, 1913.
Bispham, Maj. W. N.	Report on a series of cases of pneumonia treated by vaccines.	The Military Surgeon, June, 1912.
Blanchard, Capt. R. M.	The use of heroin by soldiers.	The Military Surgeon, 1913.
Bushnell, Col. Geo. E.	Immunity through tuberculous infection.	The Military Surgeon, January, 1913.
	Marginal sounds in the diagnosis of pulmonary tuberculosis.	New York Medical Record, 1912, Dec. 21.
Card, Capt. Daniel P.	Traumatic rupture of intestines; operation; recovery.	Military Surgeon, May, 1913.
Chamberlain, Maj. W. P.	Some features of the physiologic activity of Americans in the Philippines.	Read before the American Association of Tropical Medicine, Washington, May, 1913.
	The character of rice which prevents beriberi and the manner in which it it milled.	Do.
	Polished rice and beriberi.	Boston Medical and Surgical Journal, 1913.
	See also Board for the Study of Tropical Diseases.	
Church, Maj. James Robb.	History of a supposed case of leontiasis ossium.	The Military Surgeon, 1912.
Clarke, First Lieut. Howard.	Medical service in the field.	Publication not given.
Cole, Capt. Clarence L.	Typhoid fever perforation of a false diverticulum of the small intestine, about 18 inches above the cæcum. Early operation; recovery.	Journal of the American Medical Association, 1912.
Craig, Capt. Charles F.	The relation of parasitic ameba to disease.	Read in a section of the International Congress on Hygiene and Demography; New Orleans Medical and Surgical Journal, July, 1912.
	The results of antityphoid vaccination in foreign armies.	Read before the International Congress on Hygiene and Demography and published in S. G. O. Bulletin No. 2.
	The present status of our knowledge regarding the parasitic ameba.	Read at the meeting of the Southern Medical Association at Jacksonville, Fla., November, 1912.

Articles by medical officers of the Army approved for publication by the Surgeon General's Office, July 1, 1912, to June 30, 1913—Continued.

Author.	Article.	Published in—
Craig, Capt. Charles F	The interpretations of the results of the Wassermann test.	Read before the District of Columbia Medical Society and published in the Journal of the American Medical Association, 1912.
	The identity of entameba histolytica and entameba tetragena.	Journal of the American Medical Association, 1913.
	The identity of entameba histolytica and entameba tetragena, with observations upon the morphology and life cycle of entameba histolytion.	Journal of Infectious Diseases, 1913.
	The prophylaxis and treatment of malarial affections.	International Clinics, 1913.
Culler, Capt. Robert M	Epididymotomy—A plea for rational treatment for epididymitis.	Journal of the American Medical Association, 1912.
Davidson, Maj. W. T	Notes on some tropical diseases encountered in Cuba and the Philippine Islands.	Bulletin of the El Paso County Medical Society.
	A case of spontaneous rupture of the malarial spleen; splenectomy.	Texas State Journal of Medicine, 1913.
De Loffre, Capt. Samuel M	Specializing in the Medical Corps, with special reference to obstetrics and gynecology.	Military Surgeon, 1913.
Duncan, Capt. Louis C	The Medical Department of the United States Army in the Civil War "When Sherman marched down to the sea."	Military Surgeon, August, 1912.
	The great battle of West, Chickamauga	Military Surgeon, October, 1912.
	Pope's Virginia campaign	Military Surgeon, January, 1913.
	The death of McPherson	The Military Surgeon, 1913.
	The bloodiest day in American history; Antietam.	Military Surgeon, May, 1913.
	The campaign of Fredericksburg	Military Surgeon, July, 1913.
	The use of motor vehicles in transporting wounded.	Journal of the Military Service Institute, 1913.
	Evolution of the Ambulance Corps and field hospital.	Military Surgeon, March, 1913.
Eckels, First Lieut. Lauren S.	Epididymotomy	Journal of the American Medical Association, 1913.
Fauntleroy, Maj. P. C	Notes on the Turko-Balkan War	Publication not known.
Ford, Maj. J. H	The disposal of wastes	Read before Fifteenth International Congress on Hygiene and Demography; published in S. G. O. Bulletin No. 2.
	Notes on organization and equipment for evacuation of the wounded.	Military Surgeon, December, 1912.
Foster, First Lieut. Geo. B	Division field laboratory; its possibilities as illustrated by experience with the maneuver division.	Military Surgeon, October, 1912.
	Antityphoid vaccination.	
	The Noguchi leutin reaction in syphilis	Journal of the American Medical Association, 1913.
Fox, First Lieut. L. Webster	Ocular diseases incidental to advanced life, considered in connection with claims for pensions.	Military Surgeon, September, 1912.
French, First Lieut. Sanford W.	Some suggestions for a modified iodine container.	Military Surgeon, July, 1912.
Gentry, First Lieut. Ernest R.	(See Board for the Study of Tropical Diseases.)	
Goldwaite, First Lieut. R. H.	Salvarsan and malaria	Military Surgeon, October, 1912.
Hartsock, Maj. F. M	The management of gonorrheal rheumatism.	Read before the Michigan State Medical Society, 1912.
Howard, Maj. Deane C	The prevention of venereal diseases	Read before the Fifteenth International Congress on Hygiene and Demography, published in S. G. O. Bulletin No. 2.
Jones, Capt. Harold W	Depressed fracture; dislocation of the malar bone; report of a case with operative treatment.	Military Surgeon, 1913.
	A study of recruits according to Pignet's factor.	Do.
Jones, Capt. Percy L	Disposal of garbage in barracks	Military Surgeon, October, 1912.
Kilbourne, Capt. E. D	A report of 600 cases of measles occurring at Columbus Barracks, Ohio.	Military Surgeon, September, 1912.
Lake, First Lieut. Geo. B	The treatment of infantile convulsions	New York Medical Journal, 1912.
Leary, First Lieut. T. J	A surgical method of clearing up chronic typhoid carriers.	Journal of the American Medical Association, 1913.

Articles by medical officers of the Army approved for publication by the Surgeon General's Office, July 1, 1912, to June 30, 1913—Continued.

Author.	Article.	Published in—
Love, Capt. Albert G	Typhoid prophylaxis in the British Army in India and in the American Army in the United States.	Military Surgeon, March, 1913.
	Some of the history of the annual report of the Surgeon General, with extracts.	Military Surgeon, April, 1913.
Lyster, Maj. T. C	The military importance of deviations of the nasal septum.	Military Surgeon, 1912.
Maddux, First Lieut. H. C.	Hospital treatment of acute gonorrhea	Military Surgeon, 1913.
Munson, Maj. E. L.	The Soldier's Foot and the Military Shoe (book).	Printed by the United States Cavalry Association, Fort Leavenworth, Kans., 1912.
	Gaseous disinfection of equipment in the field.	Read before the Fifteenth International Congress on Hygiene and Demography, and published in S. G. O. Bulletin No. 2; also published in Military Surgeon, February, 1913.
	The influence of certain camp epidemics upon the geographical expansion, political history, and military policy of the United States.	Military Surgeon, November, 1912.
Nichols, Capt. H. J.	Medical work in the Army	Yale Review, 1912.
	The demonstration of spirochæta pallida in the cerebral spinal fluid of a case of nervous relapse following the use of salvarsan. (Collaborated with Dr. Hough).	Journal of the American Medical Association, January, 1913.
	Positive results following the inoculation of the rabbit with paretic brain substance; a preliminary note.	Journal of the American Medical Association, 1913.
Patterson, Maj. Robert U.	A straddle trench cover	Military Surgeon, June, 1912.
Pierson, Capt. R. H.	The relation of medical officers to military discipline.	Do.
Pillsbury, Capt. H. C.	Cases of cerebrospinal meningitis observed at Jefferson Barracks.	Military Surgeon, July, 1913.
Porter, Capt. R. S.	Prompt response to treatment by subcutaneous injection of blood serum in case of melæna neonatorum.	Military Surgeon, 1912.
Reasoner, Capt. M. A.	Provocative reaction in syphilis	Read before the San Diego County Medical Society.
Reno, Maj. Wm. W.	A new travois; a plea for its addition to the equipment of ambulance companies.	Military Surgeon, December, 1912.
	A proposed method of pitching or striking a field hospital rapidly.	Military Surgeon, April, 1913.
Russell, Maj. F. F.	Antityphoid vaccination	Published in the Proceedings of the Harvey Society, 1913.
	Antityphoid vaccination in children	Journal of the American Medical Association, 1912.
	Progress in antityphoid vaccination during 1912.	Journal of the American Medical Association, 1913.
Schmitter, Capt. F.	The leutin test	Publication not given, 1913.
Shockley, Maj. M. A. W.	A simple marker set for the solution of medical field problems.	Military Surgeon, September, 1912.
Skinner, Maj. Geo. A.	Gunshot fracture of both bones of the forearm; recovery.	Do.
Slee, Lieut. Richard, M. R. C.	Connecticut manœuvers	The American Journal of Clinical Medicine, January, 1913.
Stallman, First Lieut. Geo. P., M. R. C., U. S. A.	Ants destroying larvæ of flies	Military Surgeon, September, 1912.
Tropical Diseases, Board for the Study of.	Report for quarter ending Dec. 31, 1911	Military Surgeon, August, 1912.
	Report for quarter ending Mar. 31, 1912	Military Surgeon, October, 1912.
Van Poole, Maj. G. M.	A case of quinine idiosyncrasy	Read at the annual meeting of the Association of Military Surgeons, 1913; published in Military Surgeon, February, 1913.
Vedder, Capt. Edward B.	History of Beriberi (book); (see also Board for the Study of Tropical Diseases).	1913.
Wadhams, Maj. S. H.	Report on three cases of amebic dysentery treated with salvarsan.	Journal of the American Medical Association, 1913.
	Results of treatment of syphilis with salvarsan and neosalvarsan.	Do.
Whitmore, Maj. Eugene R.	Pathogenic ameba	Read in abstract before meeting of American Association of Tropical Medicine at Washington, May, 1913; published in proceedings and in official organ of the society.

Articles by medical officers of the Army approved for publication by the Surgeon General's Office, July 1, 1912, to June 30, 1913—Continued.

Author.	Article.	Published in—
Wilde, First Lieut. A. G.	Post anesthetic nausea Iodine idiosyncrasy	Military Surgeon, 1913. Do.
Wilson, Maj. Wm. H.	Prophylaxis in the Army	Read before Maine State Medical Society, May, 1913.
Winter, Lieut. Col. Francis A.	Preparedness of the Medical Department of the Army in the matter of field medical supplies.	Read before the class at the Army War College and published in the Military Surgeon, January, 1913.

BULLETINS.

In the sundry civil bill for 1913, under the appropriation for printing and binding for the War Department, it was provided—

> That the sum of $3,000, or so much thereof as may be necessary, may be used for the publication from time to time of bulletins prepared under the direction of the Surgeon General of the Army for the instruction of medical officers when approved by the Secretary of War.

It is hoped that this appropriation will be continued from year to year in the future. It is intended that these bulletins shall be used for the publication to the Medical Corps of the special technical work of the service laboratories, the reports of the boards for the study of tropical diseases, and other work of medical officers which is of too special or technical a character to make it acceptable for publication in the medical journals and the Military Surgeon.

From this time on the bulletin will be published, if possible, at least quarterly. Officers of the corps are requested to submit suitable original articles to this office for use in the bulletin, with the understanding that they may be published elsewhere by the author if found not suitable for the bulletin.

The three following bulletins have been published:

No. 1.—Photomicrographs of Spirochetae, Entamebae, Plasmodia, Trypanosomes, Leishmania, Negri Bodies, and Parasitic Helminths.

No. 2.—Papers by Officers of the Medical Corps, U. S. Army, read before the Fifteenth International Congress on Hygiene and Demography.

No. 3.—Studies of Syphilis, by Capt. Charles F. Craig, and Capt. Henry J. Nichols, Medical Corps, United States Army, with introduction by Maj. Frederick F. Russell, Medical Corps, United States Army.

REPRESENTATION OF THE MEDICAL DEPARTMENT OF THE ARMY AT MEETINGS OF NATIONAL AND INTERNATIONAL MEDICAL CONGRESSES, ETC.

The act approved March 4, 1913, making appropriation to supply deficiencies in the apporpriations for the fiscal year 1913 contained the following provision:

> * * * Hereafter the Executive shall not extend or accept any invitation to participate in any international congress, conference, or like event, without first having specific authority of law to do so.

Also in the act for the support of the Government of the District of Columbia for the fiscal year 1913 was inserted a general provision as follows:

> SEC. 8. No money appropriated by this or any other act shall be expended for membership fees or dues of any officer or employee of the United States or of the District of Columbia in any society or association or for expenses of attendnace of any person at any meeting or convention of members of any society or association, unless such fees, dues, or expenses are authorized to be paid by specific appropriations for such purposes or are provided for in express terms in some general appropriation.

This latter provision was subsequently revoked so far as it affected the appropriation for the fiscal year 1913, but it is the understanding of this office that it still holds good for future appropriations.

Since July 1 of this year these two enactments have effectually put a stop to participation on the part of the Medical Corps of the Army in the valuable activities represented by the American Medical Association and other national organizations as well as international bodies.

International congresses which cover the whole medical field and others covering certain specialties have greatly multiplied during recent years, and are recognized as exercising a powerful influence on the progress of the medical sciences and the adoption of perfected methods; also the influence upon the individual physicians attending them is equally salutary and broadening. It has been the well-settled policy of the War Department to send representatives of the Medical Department of the Army to the meetings of the important national associations, such as the American Medical Association, the American Public Health Association, and the Association of Military Surgeons, as it is considered very important that its officers shall be well known and influential among their professional brethren in this country, and that their high professional standing shall exert an influence in attracting the best class of medical graduates to the service. Representation at the meetings of the Association of Military Surgeons is of peculiar importance on account of the opportunities given to influence and instruct the officers of the Organized Militia.

For these reasons it has been recommended by this office that steps be taken to secure from Congress specific authority for the Executive to send representatives of the War Department to national and international congresses in which he deems it desirable that the Medical Department should be represented, and to pay from the mileage appropriations the actual expenses incurred by delegates to international congresses. It has also been recommended that section 8 of the act for the support of the government of the District of Columbia for the fiscal year 1913 (above quoted) be repealed so far as it affects the Medical Department of the Army.

SANITARY TROOPS OF THE ORGANIZED MILITIA.

The following is an extract from a report furnished this office by Maj. Harry L. Gilchrist, Medical Corps, United States Army, detailed for duty in the office of the chief, Division Militia Affairs, War Department:

> While there has been some improvement in the efficiency of the sanitary troops of the Organized Militia during the past year, yet this improvement has not been as great

nor as general as is desired, and as essential to securing real efficiency. The principal causes of the present unsatisfactory condition are lack of proper equipment, of suitable instructors, of proper support and encouragement on the part of the State authorities, and to some extent inefficient personnel in the Medical Department itself of the Organized Militia. As to these different causes it may be said that a large part of the equipment now on hand is either obsolete or worn out; that there are no inspector-instructors of the Regular Army on duty with the Medical Department of the Organized Militia, as is the case in all other branches of the service; that there is great reluctance on the part of State adjutants general to make requisition for modern equipment in sufficient quantities; that a part of the personnel, not knowing the real duties of this branch of the service in the field, fail to realize the character and amount of training necessary, and consequently tolerate many men who, while they may be efficient practitioners in civil life, are entirely ignorant of their duties in the field. The entire matter may be summed up by saying that there is still a generally prevalent idea that a medical officer is merely a doctor practicing his profession under possibly different conditions in the field from those obtaining in civil life, but that there is no substantial difference in the character of his work. That the practice of medicine is only a small part of his duties is by no means generally recognized either by State authorities or by a large number of the medical officers themselves, and consequently no material improvement can be looked for until a more correct conception of the duties of medical officers and sanitary troops in the field is obtained. The best method of establishing correct ideas on the subject is, according to the chief, Division of Militia Affairs, to detail medical officers of the Regular Army as inspector-instructors of the Organized Militia, as is done in the case of other arms. In this recommendation the Surgeon General concurs and his office will do everything within its power to assist in carrying out this idea. The presence of these officers continuously with the Organized Militia will serve to disseminate correct ideas as to field duty, would show the necessity of proper and adequate equipment, will standardize instruction generally, and will secure true progress.

Inasmuch as the organization and instruction of the sanitary troops in the different States are left entirely to State administration, few have adopted the same plan or routine in the matter, and as a result all have separate and distinct forms. This results in many different varieties of medical organizations, some good, others poor. In some the commissioned officers are appointed by the regimental officers, the only requirement being an acceptable personality; in other States commissioned officers are only appointed after having successfully passed rigid examinations. In some States the commissioned personnel is entirely too large for the number of troops in the State, but in the majority of the States the enlisted personnel is much too small. To overcome some of these objections the Division of Militia Affairs has prepared a plan of organization for the medical departments of the Organized Militia which corresponds as nearly as possible with the act governing the organization of the medical establishment of the Regular Army. A plan of instruction has also been worked out for the sanitary troops of the Organized Militia which is along the lines followed by similar troops in the regular establishment. The scheme of instruction is quite complete and covers all subjects the commissioned officer and the enlisted man of the medical department should be familiar with. The course for officers is of a four years' duration. For the enlisted men a two years' course has been prepared.

The strength of the sanitary troops of the Organized Militia, as shown by the annual inspections in 1913, is shown in the table below.

Heretofore the number of enlisted men in the Hospital Corps in the majority of the States has been far below the minimum requirements, and no efforts were made to keep this branch of the military service up to the standard. In Circular No. 8, War Department, Division of Militia Affairs, August 1, 1913, provisions have been made to accomplish this purpose. Hereafter States that have medical organizations will be obliged to keep their sanitary personnel up to meet the legal requirements. A maximum number has been prescribed for each regiment, battalion, field hospital, and ambulance company, which will be strictly adhered to.

An effort is also being made to have regimental infirmaries with all regiments, these infirmaries to be complete in all respects and all obsolete and worn-out property replaced by new.

Number of the sanitary personnel and units in the Organized Militia on June 30, 1912, and June 30, 1913.

	Medical officers.		Enlisted men.		Field hospitals.		Ambulance companies.		Detachments Hospital Corps.	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
Alabama	11	11	35	12					3	1
Arizona	4	4	1	10						1
Arkansas	17	15	21	25						1
California	18	24	55	121		1		1	6	6
Colorado[1]	11	12	31	29					2	3
Connecticut	21	18	69	102	1	1	1	1	2	3
Delaware	2	3	10	8					1	1
Florida	10	9	25	20					1	1
Georgia[1]	19	17	46	33					6	5
Idaho	7	4	21	20					1	1
Illinois[1]	49	51	167	158					10	10
Indiana	20	19	95	115	1	1	1	1	2	2
Iowa	20	12	87	77	1	1			4	4
Kansas	7	7	24	21					1	1
Kentucky	17	17	33	48	1	1				1
Louisiana	10	2	36	22					1	1
Maine	9	9	48	41					2	2
Maryland	17	16	85	32		1			1	
Massachusetts	39	44	123	146	1	1	1	1		11
Michigan	23	12	119	132	1	1	2	2		
Minnesota	17	17	35	35					4	4
Mississippi	10	12	28	16	1	1				
Missouri	28	17	48	69	1	1	2	1		3
Montana	4	4	19	24					1	2
Nebraska	16	20	38	26	1	1				
Nevada										
New Hampshire	8	7	43	29					2	2
New Jersey	30	31	93	112	1	1			5	8
New Mexico	10	3	18	10					2	2
New York	100	110	438	579	2	2	3	3	28	31
North Carolina	18	22	102	98	1	1	1	1	2	3
North Dakota	5	4	23	24					1	1
Ohio	52	48	197	239	2	2	2	2		4
Oklahoma	4	2	31	28	1	1				
Oregon	15	12	42	38			1	1		1
Pennsylvania[1]	58	59	136	147					13	13
Rhode Island	10	10	30	32	1	1				1
South Carolina	13	4	47	36					3	1
South Dakota	6	6	8	(?)						
Tennessee	17	12	90	95	1	1	1	1	3	4
Texas[1]	15	4	(?)	38						(?)
Utah	4	1	10	10					1	1
Vermont	3	4	24	18					1	1
Virginia	15	17	42	59					6	7
Washington[1]	6	7	30	23					1	1
West Virginia	7	8	23	25					1	1
Wisconsin	14	12	42	43					3	3
Wyoming	4	4	11	21					3	4
District of Columbia[1]	11	13	40	48					1	1
Hawaii	3	3	16	10					1	1
Total	834	779	2,794	3,104	18	20	15	15	125	154

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[1] States to which field hospitals have been issued and are now being organized.

CONSTRUCTION AND REPAIR OF HOSPITALS.

During the past year plans and specifications were prepared and contracts were entered into for the construction of isolation wards at Fort Bliss, Tex., Fort Oglethorpe, Ga., and Fort Totten, N. Y.; dormitories at the Army and Navy General Hospital, Hot Springs, Ark., and the Letterman General Hospital, San Francisco, Cal., for the Army Nurse Corps; a hydrotherapeutic plant and an additional ward at the Walter Reed General Hospital, Takoma Park, D. C.; a hydrotherapeutic ward, a sterilizing and disinfecting building, and an addition to the detention ward at the Letterman General Hospital, San Francisco, Cal.; and additional wards to the hospitals at Fort Bliss, Tex., Fort Huachuca, Ariz., and Fort Shafter, Hawaii; and for additions and improvements to the hospitals at Fort H. G. Wright, N. Y., Fort Monroe, Va., Fort Sill, Okla., and Fort D. A. Russell, Wyo. A small temporary hospital was also erected at Camp Yosemite, Cal.

Two sets of plans and specifications were prepared for an isolation ward at Fort Benjamin Harrison, Ind. Proposals were invited, but all bids received were largely in excess of the amount available for such a building and had to be rejected. It appears that the location of this post renders it impossible to erect a suitable isolation ward for the limited sum of $20,000 fixed by section 1136, Revised Statutes.

The following buildings which were contracted for during the fiscal year ending June 30, 1912, have been completed: Isolation wards at Fort D. A. Russell, Wyo., and Fort Sheridan, Ill.; additions to the main hospital building at the Walter Reed General Hospital, Takoma Park, D. C., Fort Monroe, Va., the Letterman General Hospital, San Francisco, Cal., the Presidio of Monterey, Cal., Fort Sill, Okla., Fort Shafter, Hawaii, and at Fort Yellowstone, Wyo.; and an addition to the dormitory at the Army Nurse Corps, Walter Reed General Hospital, Takoma Park, D. C.

An allotment of $60,000 was made from the appropriation for construction and repair of hospitals for use in the Philippines Department during the fiscal year, and $2,000 from the appropriation for quarters for sergeants, first class, Hospital Corps, to cover the cost of quarters for these noncommissioned officers in the Philippines.

In addition to the foregoing the Army general hospitals and the hospitals at military posts were improved or kept in proper repair so far as funds would permit.

New hospital buildings are required at numerous military posts to replace old and dilapidated structures which have been in use for many years and which require large sums of money annually for repairs and improvements. New structures of modern type would be economical, but it is impossible to erect a suitable modern military hospital for the maximum sum allowed by law from the general appropriation for such purposes. Section 1136, Revised Statutes of the United States, limits the cost of permanent structures to $20,000, unless special authority is first obtained from Congress.

This law was enacted in 1853, when material and labor were much lower in price than they are at present. The statute should be modified to suit present conditions.

The Army and Navy General Hospital, Hot Springs, Ark., needs additional buildings and grounds to meet the increased demands being made for accommodations. While the Army has increased and the demands for admissions to this hospital have grown materially, no increase has been made in years in buildings for the care of patients until now the problem of providing for applicants is becoming serious. The lack of accommodations for discharged soldiers who are entitled to be admitted to this hospital was severely felt during last fall and winter. It was impossible to care for all those entitled who desired to avail themselves of the benefit of the treatment at this institution except by curtailing the period of treatment of those already admitted, and many were obliged to wait for longer or shorter periods until vacant beds became available. The number of persons applying for permit to enter during 1912 shows an increase of 34 per cent over 1911. Sufficient accommodations should be provided so that those who are entitled to enter can be permitted to remain until they have received all possible benefit of treatment there. Even after funds are provided, several years must elapse before the improvements can be completed. The additional wards, messing facilities, other necessary buildings, roads, walks, etc., is estimated to cost $420,000, apportioned as follows:

Officers' hospital, with one 18-bed ward, 18 private rooms, operating room, baths, all equipment, and furniture	$100,000
Three-story ward, for veterans	60,000
Additional story to wards Nos. 1 and 2	40,000
Post exchange with a gymnasium, bowling alleys, shower baths, and amusement halls	40,000
Hospital Corps barracks	40,000
Three double sets noncommissioned officers' quarters	30,000
Increasing size of bathhouse, renovating and equipping same	50,000
Lowering the elevator shaft in ward 3 to level of bathhouse, constructing passage between two buildings and installing electric elevator	8,000
Increasing size of stables	7,000
Storehouse for quartermaster and medical supplies	20,000
Refrigerating plant for cooling hot water for bathing	15,000
Roads, walks, and grading	10,000
Total	420,000

The additions most urgently needed are the officers' hospital, and the Hospital Corps barracks, which should be provided even if the capacity of the hospital be not increased as recommended.

Items for improving this hospital were included in the annual estimates from this office for 1913 and 1914, but were eliminated by order of the Secretary of War.

As stated in the last report new and modern hospitals should be erected at the following military posts in the near future:

Fort McPherson, Ga.—The hospital at this post is in size entirely inadequate. It is located in close proximity to a railroad and has no cellar except a small excavation for a heating apparatus, which was made some years after the building was erected. The heating and ventilation are not suitable for a modern hospital. The plumbing is crude, and efforts have been made from time to time to improve it, but it falls far short of meeting the modern sanitary requirements. The operating room is located in a small annex, with a small laboratory adjoining. There is no instrument room, etherizing room, preparation rooms, nor surgical ward. There is no suitable ward for the isolation of contagious diseases nor prison ward, and the Hospital Corps detachment is quartered in an old temporary wooden building which was erected for use as a ward during the Spanish-American War. The mess room and kitchen are too small, and are unsuited for their purpose, it being necessary to set tables two or three times to accommodate the patients. The entire hospital is such, that it would be in the interest of economy to replace it with a modern structure. A hospital should be erected of capacity of 87 beds for patients and the necessary attendants. The estimated cost of such a building is $90,000.

Post of Washington Barracks, D. C.—A hospital was erected at this station in 1893. This became a general hospital in 1898, and was abandoned as such upon completion of the Walter Reed General Hospital in 1909. It is to be torn down to secure room to complete a barrack building, which is now partly erected. Some provision should be made for sick call, administrative purposes, and for the temporary care of the sick at this post. A central infirmary, with one small ward, a receiving room, office, etc., to care for the sick until such time as the patients can be moved to the Walter Reed General Hospital will answer the purpose. Such a building, in keeping with the architectural appearance of other buildings at the post, is estimated to cost $25,000.

Fort Hamilton, N. Y.—In 1904 the commanding officer of this post stated that the present hospital was entirely inadequate for the needs of the garrison; that there was insufficient space for attendants; that there was no isolation ward nor prison ward, and that in the rearrangement of the post a better site had been selected. In 1906 the chief surgeon, Department of the East, stated that the hospital was very badly located, standing on rather low ground facing at a distance of 14 yards a noisy public highway, on the other side of which were saloons and other objectionable places of public resort. In view of these circumstances, the interests of the service will best be subserved by erecting a modern hospital on a more appropriate site, especially as it is proposed to use the present building for a band barrack. A hospital of sufficient capacity for this post should contain 60 beds for patients and suitable accommodations for attendants, noncommissioned officers, etc. The estimated cost of such a building is $60,000.

Fort Dade, Fla.—It is understood that this is intended to become the main post in an artillery district. The present hospital is entirely inadequate and unsuitable. It is a temporary structure, with crude plumbing, lacks modern appliances, and the conditions are such that they can only be remedied by the erection of a new and modern hospital. In 1910 the Secretary of War approved a recommendation of the Chief of Coast Artillery, that a new hospital be erected at this post. A suitable structure is estimated to cost $30,000.

Presidio of San Francisco, Cal.—The old hospital at this post, with the exception of a small portion used as a dispensary, has not been occupied since 1905. It was erected during the Civil War, has been unsuitable for hospital purposes for years, and is not properly located for use as a dispensary. A modern dispensary building is desired at this post, in a suitable location. It is recommended that the old hospital be abandoned and that those requiring hospital treatment be sent, as at present, to the Letterman General Hospital. It would require a large expenditure of funds to modernize the old hospital and render it suitable for modern hospital purposes, and it would be more economical to erect a new building. A suitable dispensary is estimated to cost $25,000.

Fort Benjamin Harrison, Ind.—One ward wing and the administration building of a modern hospital have been erected at this post, but the building has not been completed. It lacks one ward wing and a rear annex. It is insufficient in capacity, and in March, 1909, the surgeon recommended that the hospital accommodations at this post be doubled. The chief surgeon, Department of the Lakes, stated:

> It is important that the hospital at Fort Benjamin Harrison be completed at an early date, as the hospital facilities are inadequate even for the regular garrison, and are entirely so when the post is used as a base for the maneuver camp. One wing and the annex are yet lacking, and in fact less than half of the hospital has been completed.

The department commander stated that this hospital should be completed by adding another wing and the rear annex required for the standard plan for a 60-bed hospital. To complete this building in the manner recommended is estimated to cost $40,000.

Fort Crook, Nebr.—The hospital at this post is inadequate. It lacks a suitable kitchen, mess room, Hospital Corps dormitory, prison ward, isolation ward, etc. It is purposed to add a rear annex to contain these rooms, thus relieving the administration building, and providing more room for patients, clerical work, etc. The estimated cost of a rear annex is $25,000.

Fort Des Moines, Iowa.—The hospital at this post has never been completed, and is inadequate. The administration building and one ward wing of the standard plan were erected. It lacks one ward wing and the rear annex. To complete this hospital by adding another ward wing and a rear annex is estimated to cost $40,000.

Fort Missoula, Mont.—The administration building and one ward wing of a new hospital have been completed at this post, but another ward wing and a rear annex are required to complete the building and to supply accommodations for a regimental post. To complete this hospital the estimated cost is $40,000.

Fort Niagara, N. Y.—The hospital at this post has 13 beds. The garrison is to consist of 8 companies of Infantry. This will require hospital accommodations for 32 patients, 15 Hospital Corps privates, and 4 noncommissioned officers. It is proposed to enlarge this hospital by adding another ward for 12 beds, and a rear annex to contain kitchen, mess hall, Hospital Corps dormitory, prison ward, isolation ward, etc. The estimated cost of these improvements is $35,000.

Fort Terry, N. Y.—The hospital at this post is inadequate, and in 1910 the surgeon recommended the erection of a rear annex. This hospital was erected in 1900 and contained 12 beds. In 1910 a second story was added to the ward, thus doubling the bed capacity. A larger kitchen, mess room, etc., are necessary. There is no isolation ward, prison ward, hospital corps dormitory, etc., and the desire is to add a rear annex to the hospital, containing the necessary rooms, and relieving the administration building. The estimated cost of a suitable building is $25,000.

Hawaiian Islands.—A large division hospital of not less than 300 beds will be needed in or near Honolulu for the proposed division of troops which is to be in garrison there. It would be better and in the end more economical to construct this hospital new throughout, but from motives of economy it was decided to expand a small wooden hospital at Fort Shafter which has been done by the erection of three pavilion wards, enlarging the mess room and erecting a new kitchen. These wards increase the capacity by 60 beds, but no provision has been made for attendants, etc. In the opinion of this office accommodations should be provided for 100 additional patients, 52 Hospital Corps privates, 13 noncommissioned officers, modern operating rooms, isolation wards, etc. On account of the high cost of material and skilled labor the cost of such building is estimated at $120,000.

General Hospital, Fort Bayard, N. Mex.—Authority was given to erect three additional ward buildings for this general hospital, but it was possible to enter into contract for the erection of only two of these wards. To erect the third ward building $50,000 is needed.

Seacoast Artillery posts.—Owing to the increase in the Coast Artillery and the concentration of companies at various posts, it is necessary to increase the hospital accommodations by enlarging the buildings. Such has been done at several posts, but it is estimated that $100,000 will be required to complete the work.

Isolation wards.—Eighteen of these wards have been authorized, of which 13 have been completed, 4 are in course of erection, and 1 is to be contracted for. These buildings are absolutely necessary at large military posts, but it has not been possible to secure funds for more than three during any one year. It is essential to good sanitary administration in the Army that this policy be continued, and that provision be made promptly for the erection of isolation wards at military posts with a garrison of a regiment or more. At least 10 more of these wards will be necessary. At the rate of 3 in each year it will require over three years to supply the most important posts. These wards are for patients suffering from infectious diseases, and for those under observation until the diagnosis is determined. They contain in addition to beds for patients, dressing rooms, toilet rooms, nurses' rooms, diet kitchens, a mortuary, and a complete disinfecting plant where needed.

Quarters for sergeants, first class, Hospital Corps.—Owing to the limited appropriation for these buildings, it was not possible to erect additional quarters. A number of large military posts are in need of quarters for these noncommissioned officers, and the appropriation should be liberal until such time as the sergeants, first class, Hospital Corps are supplied with suitable habitations. The Philippine Department is in need of funds for this purpose, $12,000 being requested by the department commander, but it was possible to supply only $2,000. All the quarters at military posts already established and occupied have been repaired, improved, and kept in good condition so far as the limited appropriation would permit.

The Army Medical School occupies a rented building in this city. As it is one of the permanent service schools it would be much more economical, as well as more fitting and convenient, for it to be housed in buildings erected by the Government. It is proposed to erect these on a tract of land occupied by the Walter Reed General Hospital, so that the students may have the clinical advantages and the instruction in administration afforded by the hospital, and that the hospital may enjoy the laboratory conveniences of the school. These buildings are estimated to cost $350,000.

Estimates for new construction which are absolutely essential to the proper care of the sick have been for some years eliminated from the estimates of this office in accordance with the instructions of the Secretary of War in order to reduce the War Department estimates until now the necessities of the medical department in this respect have become very urgent and have accumulated to a large total. The following are the items which it is considered are immediately necessary and are accordingly included in the estimate laid before the Secretary for the fiscal year 1914–15:

Hospitals:	
Fort McPherson, Ga	$90,000
Fort Hamilton, N. Y	60,000
Fort Logan H. Roots, Ark	50,000
Fort Dade, Fla	30,000
Dispensary, Presidio of San Francisco, Cal	25,000
Dispensary, Washington Barracks, D. C	25,000
Three isolation hospitals	60,000
To enlarge and improve hospitals at artillery posts	100,000
Enlargement of hospitals:	
Fort Benjamin Harrison, Ind	40,000
Fort Des Moines, Iowa	40,000
Fort Crook, Nebr	25,000
Fort Missoula, Mont	40,000
Fort Niagara, N. Y	35,000
Fort Terry, N. Y	25,000
Additional buildings, Fort Shafter, Hawaii	120,000
Construction and repair, Philippine Islands	120,000
Army Medical School, Washington, D. C	350,000
Army and Navy General Hospital, Hot Springs, Ark	420,000
Additional wards, general hospital, Fort Bayard, N. Mex	50,000
Repairs, hospitals, all posts in the United States	200,000
Repairs and additions to general hospitals	125,000
Total for construction and repair of hospitals	2,030,000
Quarters for sergeants, first class, Philippine Islands	12,000
New quarters for sergeants, first class, all posts in the United States	133,500
Additions and repairs	25,000
Total for hospital corps sergeants' quarters	170,500

MEDICAL AND HOSPITAL SUPPLIES.

The appropriation made by Congress for the fiscal year of 1913 was $700,000, this being the amount asked for in the estimate submitted by the honorable Secretary of War.

It is believed that steady progress has been made in the provision of medical and surgical apparatus and supplies of the highest class obtainable in the markets. Effort is made to keep the equipment abreast with the demands for modern medical and surgical treatment, and it is thought that this has been fully accomplished during the past fiscal year.

Supply depots have been maintained at the same points as heretofore, and the service of supply has been adequately met. The concentration of the division at Galveston was attended to without trouble so far as the medical supplies were concerned, and the equipment is believed to have been satisfactory.

No particular new developments have been made in any line of endeavor in the matter of field supplies, but the accumulation has been pushed forward to the degree possible with the appropriations available.

Supplies to the value of $35,308.18 were issued to the Philippine Islands during the year.

Authorized dispositions of serviceable Army medical stores during the fiscal year 1913, exclusive of supplies issued for the relief of flood sufferers in the Ohio and Mississippi Valleys, amounted to $80,206.60, as shown by the records of this office on June 30, 1913, of which $59,915.46 had on or before June 30 been placed to the credit of the replacing fund established by the act approved June 12, 1906 (34 Stats., 256), and $20,291.14 was in the course of settlement. The details follow·

A. Supplies issued to States for the use of the Organized Militia, under section 1661, Revised Statutes, and appropriations supplementary thereto:

California	$3,866.48	
Colorado	3,163.81	
Connecticut	659.48	
District of Columbia	2,147.85	
Florida	5.95	
Georgia	3,780.66	
Idaho	74.50	
Indiana	292.09	
Kentucky	336.39	
Louisiana	223.50	
Maine	340.96	
Maryland	1,794.00	
Massachusetts	381.41	
Michigan	1,365.40	
Minnesota	107.67	
Mississippi	279.38	
Missouri	809.22	
Nebraska	1,310.61	
New Hampshire	347.15	
New Jersey	1,971.13	
New York	7,179.32	
North Carolina	73.30	
North Dakota	187.22	
Ohio	1,775.66	
Oklahoma	149.00	
Pennsylvania	684.24	
Rhode Island	195.45	
South Carolina	223.50	
Tennessee	2.38	
Texas	2,637.09	
Virginia	17.14	
Washington	11.26	
West Virginia	330.26	
		$36,723.46

B. Supplies sold to States under section 17, act of Jan. 21, 1903 (32 Stats., 778):		
Alabama	$39.75	
California	212.83	
Florida	10.25	
Georgia	3.00	
Iowa	7.20	
Kentucky	5.25	
Maine	93.13	
Massachusetts	493.86	
Minnesota	51.90	
New York	31.74	
Ohio	5.25	
Pennsylvania	475.41	
South Carolina	5.25	
Tennessee	3.00	
Virginia	7.00	
Washington	4.41	
West Virginia	150.00	
		$1,599.23
C. Supplies transferred to other bureaus and departments of the Government:		
Quartermaster's Department and Quartermaster Corps, United States Army	$813.98	
Engineer Department, United States Army	93.00	
Insular Bureau, War Department	529.91	
Isthmian Canal Commission	12,060.98	
Navy and Marine Corps	7,932.53	
Public-Health Service	2.00	
Reclamation Service	277.05	
Indian Service	16.50	
		21,725.95
D. Sales to the civil government of the Philippine Islands		3.82
E. Sales to the United States Soldiers' Home		12,997.03
F. Sales to the American National Red Cross		57.81
G. Sales to civilian employees of the Army and civilians		7,099.30
		$80,206.60

In addition to the foregoing, army medical supplies to the value of $8,239.40 were issued toward the relief of sufferers from floods in the Ohio and Mississippi Valleys in the spring of 1913 for which no reimbursement has at the date of this compilation (July 22, 1913) been authorized by Congress; and supplies estimated at $2,200 were issued to the Soldiers' Home which have not yet become matters of account in this office.

ARTIFICIAL LIMBS AND APPARATUS.

Under laws relating to artificial limbs and apparatus, or commutation therefor, orders on manufacturers were given during the fiscal year for 17 legs and 1 foot. Commutation certificates were issued for 155 cases of amputated leg, 92 of amputated arm, 7 of amputated foot, and 1,667 cases of loss of use of limb.

Under the act of June 17, 1870, and subsequent amendments thereto, 23,583 disabled soldiers and sailors have been furnished artificial limbs or apparatus, or have received commutation in money since the passage of the act, as follows: Total number benefited to June 30, 1913, 23,583; died, 14,236; dropped from rolls, 592; rejected after one or more payments, 571; remaining on rolls at end of fiscal year, 8,192, being a loss of 321 beneficiaries during the year.

Two-thirds of the periodical claims for benefits under the artificial-limb laws for the three years ending June 30, 1917, become due in the fiscal year 1915. To meet these claims it is estimated that the sum of $275,000 will be required.

APPLIANCES AND TRUSSES.

One hundred and twenty-two appliances were issued during the fiscal year, and 353 trusses were furnished and fitted.

LIBRARY OF THE SURGEON GENERAL'S OFFICE.

During the year 525 books and 4,205 pamphlets and journals were presented to the library. The following table shows the additions made to the library during the year 1912–13:

	On hand June 30, 1912.	Added during fiscal year.	Total, June 30, 1913.
Medical journals	56,007	1,950	57,957
Medical transactions	8,768	72	8,830
Bound theses	2,649		2,649
Bound pamphlets	3,127		3,127
Other medical books	108,077	1,892	109,969
Total	178,628	3,914	182,532
Medical theses	89,788	2,974	92,762
Medical pamphlets	225,803	4,084	229,887
Total	315,591	7,058	322,649

Volume XVIII of the Index Catalogue is in the course of preparation and will appear in due time. It includes the important subject of "Tuberculosis" and its subdivisions, which will fill about one-third of the volume.

Last year the recommendation was made that two translators be provided at a salary of $1,800 in lieu of two clerks of class 2. Application for this change was made to Congress, but it was not allowed in the legislative, executive, and judicial bill as passed for the coming fiscal year. The change, which would only add $800 per annum to the salary list, is deemed very necessary for the future welfare of the library. It would provide for two much needed specialists at a reasonable salary and in case of vacancy make it possible to apply directly to the civil service for men with a knowledge of several foreign languages and in addition either a special training in bibliography or medicine or both. At present the loss of a qualified clerk of the higher grade, experienced in library work, a graduate in medicine, or a bibliographer results, consequent upon the promotions in the Surgeon General's Office, in a vacancy in the grade of clerk at $1,000, and it is hopeless to expect to obtain a specially trained man at such a low salary.

ARMY MEDICAL MUSEUM.

The total number of specimens in the museum at the close of the fiscal year 1913 is 35,151. During the year 315 were discarded or given away and 868 were added.

The following statement shows the number of specimens in the different sections:

Pathological section	13,022
Anatomical section	1,197
Comparative anatomy	620
Microscopical section	12,916
Miscellaneous section	3,781
Provisional anatomical section	360
Photographic section	3,255

The following are some of the more interesting specimens received during the year ending June 30, 1913.

PATHOLOGICAL SECTION.

Malformations.—Specimen, 14293, eight months fetal horse showing shortening of maxillæ. Purchased. Specimen 14300, fetal pig, showing thickened humerus and both forearms shortened; only one bone, the ulna, in each forearm, and ankylosed to the humerus. Contributed by T. D. Crane, Blenco, Iowa. Specimen 14294, seven months human fetus, anencephalus and spina bifida. Contributed by First Lieut. G. B. Lake, Medical Corps, United States Army. Specimen 14322, kitten with two faces and four eyes, pseudencephalus and spina bifida. Contributed by Dr. Benj. Newhouse, Washington, D. C.

Ectopic gestation.—Two specimens, 14325, 14326; one at two months, the other at four months; removed by operation, recovery. Contributed by Dr. Isabel H. Lamb, Washington, D. C.

Tuberculosis.—Specimen 14315, tuberculoma of cerebellum; woman, age 42; had pain in top of head and in neck, marked loss of hair, staggered in walking, falling toward the left, and head turned to the left. .Contributed by Dr. P. B. Johnson, Washington, D. C. Specimens 14308 to 14311, tuberculosis of lungs, intestine, spleen, and lymphatic nodes; in an infant of 4 months. Contributed by Dr. B. M. Randolph, Washington, D. C.

Gangrene of leg and foot.—Specimen 14301; clots in popliteal and tibial arteries; soldier; had chronic myoendocarditis; heart hypertrophied; aortic valve incompetent; died of acute cardiac insufficiency. Contributed by Lieut. Col. W. D. Crosby, Medical Corps, United States Army.

Syphilis.—Specimens 14282 to 14288; seven skulls from Mongolia, showing lesions of syphilis. Obtained by Dr. Aleš Hrdlička, curator, United States National Museum.

Gunshot wound.—Specimen 14270, shot laceration of hand, caused by premature explosion of powder, firing a sunset .gun; soldier;

amputation, recovery. Contributed by Maj. L. T. Hess, Medical Corps, United States Army.

Bone.—Specimen 14314; sarcoma, giant celled; no history. Contributed by Dr. A. R. Shands, Washington, D. C.

Brain.—Specimen 14280; adenocarcinoma of brain; contributor unknown. Specimen 14297, hemorrhage on and into brain; from man who fell 35 feet and struck sidewalk with his head; fracture of skull; trephining done without success. Contributed by Dr. B. M. Randolph, Washington, D. C.

Heart.—Specimen 14312, fibrinous pericarditis; soldier; had old chronic cystitis and interstitial nephritis; had had gonorrhea two years before. Contributed by Lieut. Col. T. U. Raymond, Medical Corps, United States Army. Specimens 14295 and 14296, hypertrophy of heart and parenchymatous nephritis; boy 7 years old; heart weighed 8¼ ounces. Contributed by Dr. D. O. Leech, Washington, D. C. Specimen 14272, lymphosarcoma of mediastinum involving pericardium and pleuræ, and probably originated in mediastinal glands; soldier; was aspirated many times for serofibrinous pleuritis. Contributed by Maj. B. J. Edger, Medical Corps, United States Army.

Air passages.—Specimen 14274, partial stenosis of trachea and primary bronchi, caused by scar tissue; woman age 32; had suffocative seizures, in one of which she died. Contributed by Dr. E. H. Reede, Washington, D. C.

Stomach.—Specimen 14281, adeno-carcinoma of stomach; removed by operation; no history. Contributed by Dr. J. F. Mitchell, Washington, D. C.

Intestine.—Specimen 14278, diverticulum of jejunum perforated by apex, followed typhoid fever; peritonitis; operation, removal of specimen. Contributed by Capt. C. L. Cole, Medical Corps, United States Army. Specimen 14304, mesenteric hernia in boy 2 years old; had stercoraceous vomiting and other symptoms of obstruction; operation, specimen removed; peritonitis ensued and death. Contributed by Dr. J. R. Wellington, Washington, D. C.

Kidney.—Specimens 14275 and 14276, hypernephroma of kidney and liver; soldier; had occasional hematuria; kidney weighed 4 pounds 15 ounces and liver 5 pounds. Contributed by Maj. B. J. Edger, Medical Corps, United States Army. Specimen 14319, congenital cyst of kidney; soldier; no symptoms. Contributed by Capt. J. W. Grissinger, Medical Corps, United States Army. Specimen 14320, renal calculus, weight 18.6 grams; removed by operation from Army officer; also specimen 14321, renal calculus, weight 19 grains; removed from woman; both specimens contributed by First Lieut. T. J. Leary, Medical Corps, United States Army. Specimen 14330, chronic paranchymatous nephritis; kidneys together weighed only 4 ounces; cortex very thin; some small cysts; no history. Contributed by Dr. R. W. Baker, Washington, D. C.

Prostate.—Specimen 14303, fibroma of prostate of dog. Contributed by Dr. T. C. Smith, Washington, D. C.

Uterus.—Specimen 14292, aneurysm of uterine artery; woman age 36; had had laceration of cervix; trachelorrhaphy was followed by profuse hemorrhage; in fifteenth pregnancy again had profuse hemorrhage; from which she died. Contributed by Dr. H. W. Lawson, Washington, D. C.

Eye.—Specimen 14302; eye enucleated because of rupture caused by a blow. Contributed by Capt. C. L. Cole, Medical Corps, United States Army.

Nose.—Specimen 14273, concretion weighing 29 grains; removed from nose, after two years nasal discharge. Contributed by Dr. W. C. Williams, Peoria, Ill.

ANATOMICAL SECTION.

Specimens 4120 to 4122, three preparations showing transparency of tissues resulting from the Spalteholz process. Purchased.

MISCELLANEOUS SECTION.

Specimen 3861, a life-size painting of the average American Infantry soldier; by M. P. Whelan, Jersey City, N. J.; the average Infantry soldier is 30.9 years old, weighs 147.09 pounds, height 67.4 inches, chest in expiration 34.07 inches. Specimen 3862, Straub's garbage incinerator; Maj. P. F. Straub, Medical Corps, United States Army. Specimen 3871, Halloran folding stretcher; Maj. P. S. Halloran, Medical Corps, United States Army. Specimen 3880, old dental operating case; contributed by Dr. C. W. Mills, Chillicothe, Ohio. Specimens 3881 to 3903, series of shoes and boots, patterns used by United States soldiers 1872 to 1913. Purchased. Specimen 3869, Darnall sterilizing apparatus; Maj. Carl R. Darnall, Medical Corps, United States Army. Specimen 3970, Waterhouse-Forbes sterilizer. Specimen 3937, old French student microscope, with lever movement of stage. Specimens of sphygmomanometers, manometers, tonometers, as follows; 3850 Erlaner's; 3851 Cook's Riva-Rocci; 3852, Sahli's; 3853, Stein's; 3854, Stanton's; 3855, Gaertner's; 3863 Huerthle's; 3864, Strasburg; 3865, Bloch-Verdin's; 3866, Boulemie's; 3867, Pachen's; 3906, Nicholson's. Specimen 3904, plaster cast of skull of fossil monkey, the mesopithecus. Specimen 3936, plaster cast of calvarium of the fossil *Spy* man.

DENTAL AND ORAL DISEASES.

The number of dental operations during the year was 66,683, being an increase over the preceding year, which was 57,454. The ratio per 1,000 of mean strength was also greater, being 780.61, as compared with 716.54. This, however, can not be taken as a measure of the dental diseases of the Army, but represents what the number of dentists available are able to accomplish. The number of dentists authorized has been increased by Congress, so that ultimately each man in the Army can receive at least one treatment yearly.

The summary of the work of dental surgeons is contained in the following table:

TABLE No. 47.—*Dental and oral diseases, year 1912—Officers and enlisted men.*

	Cases admitted to treatment.		Operations performed.	
	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	44,280	721.11	48,048	782.48
Philippine Islands	17,138	925.28	21,168	1,142.86
Hawaii	3,355	945.33	2,863	806.71
Canal Zone, Panama	1,008	1,248.82	1,408	1,744.73
China	902	790.53	978	857.14
Total	66,683	780.61	74,465	871.71

DENTAL CARIES—NUMBER OF TEETH TREATED.

	White troops.		Colored troops.		Philippine troops.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
United States (continental), exclusive of Alaska	28,578	485.06	216	86.82			28,794	468.92
Philippine Islands	7,800	663.04	1,033	764.62	616	113.93	9,449	510.15
Hawaii	1,744	491.41					1,744	491.41
Canal Zone, Panama	677	838.91					677	838.91
China	505	442.59					505	442.59
Total	39,304	515.95	1,249	325.35	616	113.93	41,169	481.94

RECRUITING.

AMERICAN TROOPS.

The movement of recruits is shown in Table No. 48. Each recruit before enlistment was given a thorough examination by a medical officer of the Army. There were 32,738 examined, as compared with 50,534 for the preceding year. Of each 1,000 examined, 120.96 were rejected and 23.86 declined enlistment, as compared with 90.55 and 16.33 for 1911. Of each 1,000 examined by medical officers, 855.18 were accepted, as compared with 893.12 for 1911. Of the number examined and enlisted, 308.51 per 1,000 were reenlistments and 546.67 were original enlistments, as compared with 408.52 and 484.60 for 1911.

TABLE No. 48.—*Movement of recruits, white and colored, 1912.*

	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Examined by medical officers	30,374	1,000.00	2,364	1,000.00	32,738	1,000.00
Accepted by medical officers	25,952	854.42	2,045	865.06	27,997	855.18
By first enlistment	16,381	539.31	1,516	641.29	17,897	546.67
By all other enlistments	9,571	315.11	529	223.77	10,100	308.51
Rejected by medical officers	3,680	121.16	280	118.44	3,960	120.96
Declined	742	24.43	39	16.50	781	23.86

This table shows only the applicants who had previously passed the scrutiny of the recruiting officers at the various recruiting stations in cities and towns and who were therefore picked men. The number of examinations and of rejections by recruiting officers is not known to this office, but was, of course, much larger. The present recruiting system operates in a highly satisfactory manner and furnishes to the Army recruits of far better quality than when they were examined under the former system of civilian physicians at the places of enlistment.

TABLE No. 49.—*Natívities of accepted recruits, American Army, 1912.*

Country of birth.	Accepted recruits, year 1912.		Country of birth.	Accepted recruits, year 1912.	
	Number.	Ratio per 1,000 of total accepted.		Number.	Ratio per 1,000 of total accepted.
United States:			Denmark	88	3.14
White	22,381	799.41	Scotland	56	2.00
Colored	2,045	73.04	Turkey	48	1.71
			Holland	42	1.50
Total native born	24,426	872.45	Switzerland	41	1.46
			Roumania	36	1.29
Germany	650	23.22	France	35	1.25
Russia	587	20.97	Greece	22	.79
Ireland	515	18.39	West Indies	19	.68
Austria	448	16.00	Other	49	1.75
England	238	8.51			
Hungary	217	7.75	Total foreign born	3,571	127.55
Canada	167	5.96			
Italy	161	5.75	Grand total	27,997	1,000.00
Scandinavia	152	5.43			

The number of foreign-born recruits is less than last year, being 127.55 per 1,000 for 1912, as compared with 138.04 for 1911 and 145.56 for 1910. The most marked decrease in the proportion of recruits was from Ireland, Germany, and England in the order named.

The following tables have been carefully compiled and are of interest, as they show the state of physical development of the men admitted to the Army during the year. The ages of all the recruits accepted, including those reenlisted, white and colored, and the proportion at each age per 1,000 are shown in this statement.

TABLE No. 50.—*Ages of recruits, white and colored, and the proportion at each age per 1,000 accepted.*

Agse.	White.		Colored.		Total.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
18 years and under	1,989	76.64	125	61.13	2,114	75.51
19 years	1,148	44.24	97	47.43	1,245	44.47
20 years	600	23.12	57	27.87	657	23.47
21 years	6,118	235.74	412	201.47	6,530	233.24
22 years	2,555	98.45	227	111.00	2,782	99.36
23 years	1,604	61.81	156	76.28	1,760	62.86
24 years	1,808	69.67	156	76.28	1,964	70.15
25 years	1,421	54.76	113	55.26	1,534	54.79
26 years	1,123	43.27	99	48.41	1,222	43.65
27 years	1,072	41.31	98	47.92	1,170	41.79
28 years	896	34.53	76	37.16	972	34.72
29 years	766	29.52	55	26.90	821	29.32
30 years	628	24.20	50	24.45	678	24.22
31 years	577	22.23	41	20.05	618	22.07
32 years	558	21.50	42	20.54	600	21.43
33 years	449	17.30	52	25.43	501	17.90
34 years	356	13.72	20	9.78	376	13.43
35 years	305	11.75	21	10.27	326	11.64
36 years	297	11.44	23	11.25	320	11.43
37 years	234	9.02	24	11.74	258	9.22
38 years	176	6.78	17	8.31	193	6.89
39 years	172	6.63	16	7.82	188	6.71
40 years and over	1,100	42.39	68	33.25	1,168	41.72
Total	25,952	1,000.00	2,045	1,000.00	27,997	1,000.00

The proportion of accepted recruits under the age of 24 has noticeably increased in comparison with last year, being due undoubtedly to the much larger proportion of original enlistments of each 1,000 recruits examined and accepted by medical officers. Six hundred and nine and sixty-seven one-hundredths were 24 years of age or under as compared with 558.11 in 1911. The ages of 21 and 22 this year, as last year, furnished the largest number for any age in the order named.

The series of tables which follow show separately for each race the height of accepted recruits for the year, and the proportion of each height per 1,000; also, in absolute and proportional numbers, the relation of height to age.

TABLE No. 51.—*Relation of height to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under	....	....	....	....	....	....	....	....	1	1
5 feet 2 inches	2	....	....	4	....	....	3	1	5	15
5 feet 3 inches	18	14	9	56	29	12	15	6	88	247
5 feet 4 inches	164	96	43	357	140	86	110	77	538	1,611
5 feet 5 inches	296	152	75	602	264	170	176	161	912	2,808
5 feet 6 inches	353	205	80	895	389	226	222	196	1,288	3,854
5 feet 7 inches	350	196	116	1,108	427	272	305	246	1,511	4,531
5 feet 8 inches	346	193	110	1,014	416	302	300	247	1,460	4,388
5 feet 9 inches	208	140	78	868	343	214	270	193	1,115	3,429
5 feet 10 inches	151	82	53	643	283	177	179	135	870	2,573
5 feet 11 inches	68	40	21	325	140	77	117	92	476	1,356
6 feet	26	20	10	162	86	46	71	45	268	734
6 feet 1 inch	4	5	1	53	22	14	24	17	104	244
6 feet 2 inches and over	3	5	4	31	16	8	16	5	73	161
Total	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,709	25,962

PROPORTIONAL NUMBERS—WHITE RECRUITS, YEAR 1912.

Heights.	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
5 feet 1 inch and under	....	....	....	....	....	....	....	....	0.11	0.04
5 feet 2 inches	1.01	....	....	0.65	....	....	1.66	0.70	.57	.58
5 feet 3 inches	9.05	12.20	15.00	9.15	11.35	7.48	8.30	4.22	10.11	9.52
5 feet 4 inches	82.45	83.62	71.67	58.35	54.80	53.61	60.84	54.19	61.78	62.05
5 feet 5 inches	148.82	132.40	125.00	98.40	103.33	105.99	97.35	113.30	104.73	108.20
5 feet 6 inches	177.48	178.57	133.33	146.29	152.26	140.90	122.79	137.93	147.89	148.50
5 feet 7 inches	175.97	170.73	193.33	181.11	167.11	169.58	168.70	173.12	173.50	174.59
5 feet 8 inches	173.95	168.12	183.33	165.75	162.82	188.28	165.92	173.82	167.64	169.09
5 feet 9 inches	104.58	121.96	130.00	141.87	134.25	133.41	149.33	135.82	128.03	132.12
5 feet 10 inches	75.92	71.43	88.33	105.10	110.77	110.36	99.01	95.71	99.90	99.14
5 feet 11 inches	34.19	34.85	35.00	53.12	54.80	48.01	64.72	64.74	54.66	52.24
6 feet	13.07	17.42	16.67	26.48	33.66	28.68	39.27	31.67	30.77	28.28
6 feet 1 inch	2.01	4.36	1.67	8.66	8.61	8.73	13.27	11.96	11.94	9.40
6 feet 2 inches and over	1.51	4.36	6.67	5.07	6.26	4.99	8.85	3.52	8.38	6.20
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 52.—*Relation of height to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under	....	....	....	....	....	....	....	....	....	....
5 feet 2 inches	....	....	....	....	....	....	....	....	....	....
5 feet 3 inches	....	....	1	3	1	4	3	....	4	16
5 feet 4 inches	19	7	3	33	14	11	8	8	32	135
5 feet 5 inches	19	22	7	54	30	9	22	18	81	262
5 feet 6 inches	21	15	13	61	30	28	21	20	116	325
5 feet 7 inches	24	17	4	66	42	31	28	24	125	361
5 feet 8 inches	18	17	5	78	40	24	23	14	104	323
5 feet 9 inches	14	8	11	51	24	25	20	14	106	273
5 feet 10 inches	6	6	4	35	22	12	15	5	71	176
5 feet 11 inches	4	3	3	22	16	6	8	6	36	104
6 feet	....	2	4	5	6	4	5	3	18	47
6 feet 1 inch	....	....	1	3	1	1	2	....	7	15
6 feet 2 inches and over	....	....	1	1	1	1	1	1	2	8
Total	125	97	57	412	227	156	156	113	702	2,045

TABLE No. 52.—*Relation of height to age*—Continued.

PROPORTIONAL NUMBERS—COLORED RECRUITS, YEAR 1912.

Heights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
5 feet 1 inch and under	....	....	....	....	....	....	....	....	....	....
5 feet 2 inches	....	....	....	....	....	....	....	....	....	....
5 feet 3 inches	....	....	17.54	7.28	4.41	25.64	19.23	....	5.70	7.82
5 feet 4 inches	152.00	72.17	52.63	80.09	61.67	70.51	51.29	70.80	45.58	66.02
5 feet 5 inches	152.00	226.80	122.81	131.07	132.16	57.69	141.03	159.30	115.38	128.12
5 feet 6 inches	168.00	154.64	228.07	148.06	132.16	179.49	134.62	176.99	165.24	158.93
5 feet 7 inches	192.00	175.26	70.18	160.19	185.03	198.72	179.49	212.39	178.06	176.53
5 feet 8 inches	144.00	175.26	87.72	189.32	176.21	153.85	147.44	123.89	148.15	157.96
5 feet 9 inches	112.00	82.48	193.00	123.79	105.73	160.26	128.21	123.89	151.00	133.50
5 feet 10 inches	48.00	61.86	70.18	84.95	96.92	76.92	96.15	44.25	101.14	86.07
5 feet 11 inches	32.00	30.93	52.63	53.40	70.48	38.46	51.29	53.10	51.28	50.86
6 feet	....	20.62	70.18	12.14	26.43	25.64	32.05	26.55	25.64	22.98
6 feet 1 inch	....	....	17.54	7.28	4.41	6.41	12.82	....	9.97	7.33
6 feet 2 inches and over	....	....	17.54	2.43	4.41	6.41	6.41	8.85	2.85	3.91
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be noted that 49.65 per cent of the white recruits were 5 feet 8 inches or over and 1.01 per cent were under the minimum height of 5 feet 4 inches, as compared with 49.07 and 1.12 for the previous year.

For colored troops 46.26 were 5 feet 8 inches or over and 0.78 per cent were under the minimum height, as compared with 46.59 and 1.02.

The average height for recruits was 5 feet 7.57 inches, as compared with 5 feet 7.56 inches in 1911.

The following tables show separately for each race the weight of accepted recruits and the proportion of each weight per 1,000; also the relation of weight to age in both absolute and proportional numbers:

TABLE No. 53.—*Relation of weight to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS YEAR 1912.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	40	22	3	57	21	15	23	12	120	313
120 to 124 pounds	338	155	63	436	139	61	64	60	358	1,674
125 to 129 pounds	392	209	89	680	231	141	147	125	609	2,623
130 to 134 pounds	371	212	101	896	337	188	211	164	834	3,314
135 to 139 pounds	318	164	100	1,044	400	250	257	182	1,012	3,727
140 to 144 pounds	203	153	72	906	371	246	259	190	1,067	3,467
145 to 149 pounds	129	98	77	740	301	204	233	195	983	2,960
150 to 154 pounds	92	57	38	546	240	181	197	162	892	2,405
155 to 159 pounds	44	32	29	316	228	128	143	112	651	1,683
160 to 164 pounds	31	18	17	212	111	75	96	88	528	1,176
165 to 169 pounds	16	10	5	125	76	44	74	48	449	847
170 to 174 pounds	7	9	2	77	43	25	43	29	334	569
175 to 179 pounds	5	4	2	39	32	19	25	18	228	372
180 pounds and over	3	5	2	44	25	27	36	36	644	822
Total	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,709	25,952

TABLE No. 53.—*Relation of weight to age*—Continued.

PROPORTIONAL NUMBERS—WHITE RECRUITS YEAR 1912.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	20.11	19.16	5.00	9.32	8.22	9.35	12.72	8.44	13.78	12.06
120 to 124 pounds	169.93	135.02	105.00	71.27	54.40	38.03	35.40	42.22	41.11	64.50
125 to 129 pounds	197.08	182.06	148.33	111.15	90.41	87.91	81.30	87.96	69.92	101.07
130 to 134 pounds	186.52	184.67	168.33	146.46	131.89	117.21	116.70	115.41	95.76	127.70
135 to 139 pounds	159.88	142.86	166.67	170.64	156.56	155.86	142.14	128.08	116.20	143.61
140 to 144 pounds	102.06	133.27	120.00	148.09	145.21	153.37	143.25	133.71	122.51	133.60
145 to 149 pounds	64.86	85.37	128.33	120.96	117.81	127.18	128.87	137.22	112.87	114.06
150 to 154 pounds	46.26	49.65	63.33	89.25	93.93	112.84	108.96	114.01	102.43	92.67
155 to 159 pounds	22.12	27.88	48.33	51.65	89.24	79.80	79.10	78.82	74.75	64.85
160 to 164 pounds	15.59	15.68	28.33	34.65	43.45	46.76	53.10	61.93	60.63	45.32
165 to 169 pounds	8.04	8.71	8.33	20.43	29.75	27.43	40.93	33.78	51.56	32.64
170 to 174 pounds	3.52	7.84	3.33	12.59	16.83	15.59	23.78	20.41	38.35	21.93
175 to 179 pounds	2.51	3.48	3.33	6.37	12.52	11.84	13.83	12.67	26.18	14.33
180 pounds and over	1.51	4.36	3.33	7.19	9.78	16.83	19.91	25.34	73.94	31.67
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 54.—*Relation of weight to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS YEAR 1912.

Weights.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
119 pounds and under	....	1	1	3	1	1	....	....	1	8
120 to 124 pounds	12	7	2	20	7	4	....	2	18	72
125 to 129 pounds	18	19	9	31	14	12	7	4	36	150
130 to 134 pounds	32	14	7	51	23	19	15	11	56	228
135 to 139 pounds	24	16	10	71	33	26	19	13	79	291
140 to 144 pounds	13	13	7	51	29	23	23	16	91	266
145 to 149 pounds	13	13	3	59	34	17	18	12	96	265
150 to 154 pounds	8	7	6	45	28	15	21	15	81	226
155 to 159 pounds	4	5	1	32	26	10	15	17	63	173
160 to 164 pounds	1	....	5	20	11	14	15	6	43	115
165 to 169 pounds	....	1	2	11	8	8	12	7	41	90
170 to 174 pounds	....	....	1	9	5	3	1	4	23	46
175 to 179 pounds	....	1	2	4	4	2	5	2	24	44
180 pounds and over	....	....	1	5	4	2	5	4	50	71
Total	125	97	57	412	227	156	156	113	702	2,045

PROPORTIONAL NUMBERS—COLORED RECRUITS YEAR 1912.

119 pounds and under	....	10.31	17.54	7.28	4.41	6.41	....	....	1.42	3.91
120 to 124 pounds	96.00	72.17	35.09	48.54	30.84	25.64	....	17.70	25.64	35.21
125 to 129 pounds	144.00	195.88	157.90	75.24	61.67	76.92	44.87	35.40	51.28	73.35
130 to 134 pounds	256.00	144.33	122.81	123.79	101.32	121.79	96.15	97.35	79.77	111.49
135 to 139 pounds	192.00	164.95	175.44	172.33	145.37	166.67	121.79	115.04	112.54	142.30
140 to 144 pounds	104.00	134.02	122.81	123.79	127.75	147.44	147.44	141.60	129.62	130.08
145 to 149 pounds	104.00	134.02	52.63	143.20	149.78	108.97	115.38	106.20	136.75	129.58
150 to 154 pounds	64.00	72.17	105.26	109.22	123.35	96.15	134.62	132.74	115.38	110.50
155 to 159 pounds	32.00	51.55	17.54	77.67	114.54	64.10	96.15	150.44	89.74	84.60
160 to 164 pounds	8.00	....	87.72	48.54	48.46	89.74	96.15	53.10	61.25	56.23
165 to 169 pounds	....	10.31	35.09	26.70	35.24	51.28	76.92	61.95	58.40	44.01
170 to 174 pounds	....	....	17.54	21.84	22.03	19.23	6.41	35.40	32.76	22.49
175 to 179 pounds	....	10.31	35.09	9.71	17.62	12.82	32.05	17.70	34.19	21.52
180 pounds and over	....	....	17.54	12.14	17.62	12.82	32.05	35.40	71.23	34.72
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The average weight of recruits was 144.20 pounds; of the white troops 55.11 per cent weighed 140 pounds or over, and 1.21 per cent weighed less than the minimum, 120 pounds, as compared with 55.89 and 1.8 for 1911. Of the colored troops, 63.37 per cent weighed 140 pounds or over, while 0.39 per cent weighed less than the minimum, 120 pounds, compared with 70.48 and 0.68 for 1911.

The next tables show separately for each race the chest measurement of accepted recruits, and the proportion of each measurement per 1,000; also the chest measurement in relation to age in both absolute and proportional numbers.

TABLE No. 55.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—WHITE RECRUITS YEAR 1912.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	92	29	16	90	26	14	30	16	131	444
31 inches............	257	136	62	395	144	59	85	68	369	1,575
32 inches............	664	336	136	1,278	462	241	271	210	1,075	4,673
33 inches............	508	309	175	1,637	641	376	411	333	1,537	5,927
34 inches............	296	189	100	1,336	567	408	412	310	1,815	5,433
35 inches............	116	92	67	811	401	265	319	239	1,432	3,742
36 inches............	45	41	35	401	199	144	163	141	1,016	2,185
37 inches............	4	12	7	127	77	64	73	59	575	998
38 inches............	6	3	1	30	31	23	23	29	353	499
39 inches and over...	1	1	1	13	7	10	21	16	406	476
Total.........	1,989	1,148	600	6,118	2,555	1,604	1,808	1,421	8,700	25,952

PROPORTIONAL NUMBERS—WHITE RECRUITS YEAR 1912.

Chest measurement.	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
30 inches and under.	46.25	25.26	26.67	14.71	10.18	8.73	16.59	11.26	15.04	17.11
31 inches............	129.20	118.48	103.33	64.57	56.36	36.78	47.01	47.85	42.37	60.69
32 inches............	333.84	292.69	226.67	208.89	180.83	150.25	149.89	147.78	123.44	180.06
33 inches............	255.40	269.16	291.67	267.57	250.88	234.41	227.32	234.34	176.49	228.38
34 inches............	148.82	164.63	166.67	218.38	221.92	254.36	227.88	218.16	208.40	209.35
35 inches............	58.32	80.14	111.67	132.56	156.95	165.22	176.44	168.19	164.43	144.19
36 inches............	22.63	35.72	58.33	65.54	77.89	89.78	90.16	99.22	116.66	84.19
37 inches............	2.01	10.45	11.67	20.76	30.14	39.90	40.38	41.52	66.03	38.46
38 inches............	3.02	2.61	1.67	4.90	12.13	14.34	12.72	20.41	40.53	19.23
39 inches and over...	.50	.87	1.67	2.12	2.74	6.23	11.62	11.26	46.62	18.34
Total.........	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

TABLE No. 56.—*Relation of chest measurement to age.*

ABSOLUTE NUMBERS—COLORED RECRUITS YEAR 1912.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under.	4	1	....	7	2	....	1	....	8	23
31 inches............	17	8	3	17	6	2	3	5	31	92
32 inches............	44	38	14	64	33	31	23	8	85	340
33 inches............	31	23	17	97	58	40	38	26	142	472
34 inches............	18	15	10	121	54	31	35	30	144	458
35 inches............	8	8	9	60	44	20	27	16	119	311
36 inches............	2	3	4	32	22	20	18	17	81	199
37 inches............	1	1	....	8	7	10	5	7	42	81
38 inches............	....	....	....	3	1	2	4	3	25	38
39 inches and over...	....	....	....	3	....	....	2	1	25	31
Total.........	125	97	57	412	227	156	156	113	702	2,045

TABLE No. 56.—*Relation of chest measurement to age*—Continued.

PROPORTIONAL NUMBERS—COLORED RECRUITS YEAR 1912.

Chest measurement.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
30 inches and under	32.00	10.31	....	16.99	8.81	....	6.41	....	11.40	11.25
31 inches	136.00	82.48	52.63	41.26	26.43	12.82	19.23	44.25	44.16	44.98
32 inches	352.00	391.75	245.61	155.33	145.37	198.72	147.44	70.80	121.07	166.25
33 inches	248.00	237.11	298.25	235.42	255.50	256.40	243.59	230.10	202.28	230.80
34 inches	144.00	154.64	175.44	293.69	237.88	198.72	224.36	265.50	205.13	223.96
35 inches	64.00	82.48	157.90	145.62	193.84	128.20	173.08	141.60	169.52	152.08
36 inches	16.00	30.93	70.18	77.67	96.92	128.20	115.38	150.44	115.38	97.32
37 inches	8.00	10.31	....	19.42	30.84	64.10	32.05	61.95	59.83	39.61
38 inches	....	....	....	7.28	4.41	12.82	25.64	26.55	35.61	18.58
39 inches and over	....	....	....	7.28	....	....	12.82	8.85	35.61	15.16
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The chest measurement of 54.67 per cent of the white recruits was 34 inches and over and 1.13 per cent were 30 inches and under, as compared with 49.47 and 1.94 per cent, respectively, for the preceding year. The chest measurements for colored recruits show 51.38 per cent 34 inches or over and 1.71 per cent 30 inches and under, as compared with 52.19 and 1.88 for 1911.

The following table shows the causes of rejection among white and colored troops examined for enlistment during the year 1912, with the ratios per 1,000 rejected:

TABLE No. 57.—*Causes of rejection by medical officers of the Army, of candidates examined for enlistment, year 1912.*

Causes of rejection.	Total.		White.						Colored.	
			Native born.		Foreign born.		Total.			
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Venereal diseases	387	97.73	318	100.44	22	42.80	340	92.39	47	167.86
Heart disease	375	94.70	309	97.60	41	79.77	350	95.11	25	89.29
Defects of hearing	340	85.86	283	89.39	45	87.55	328	89.13	12	42.86
Defects of vision	331	83.58	275	86.86	38	73.93	313	85.05	18	64.29
Flat feet	219	55.30	170	53.70	36	70.04	206	55.98	13	46.43
Underweight	130	32.83	115	36.32	7	13.62	122	33.15	8	28.57
Diseases of the genito-urinary system	106	26.77	95	30.01	6	11.67	101	27.45	5	17.86
Hernia	102	25.76	79	24.95	10	19.46	89	24.18	13	46.43
Tuberculosis	101	25.51	96	30.32	2	3.89	98	26.63	3	10.71
Alcoholism	101	25.51	92	29.06	5	9.73	97	26.36	4	14.29
Defective teeth	96	24.24	72	22.74	16	31.13	88	23.91	8	28.57
Diseases of the respiratory system	87	21.97	70	22.11	13	25.29	83	22.55	4	14.29
Diseases of the organs of locomotion	82	20.71	63	19.90	12	23.35	75	20.38	7	25.00
Defects of development	80	20.20	62	19.58	10	19.46	72	19.57	8	28.57
Diseases of the skin	74	18.69	61	19.27	6	11.67	67	18.21	7	25.00
Diseases of the nervous system	66	16.67	56	17.69	7	13.62	63	17.12	3	10.71
Chest development insufficient	61	15.40	52	16.42	3	5.84	55	14.94	6	21.43
Varicose veins	55	13.89	44	13.90	8	15.56	52	14.13	3	10.71
Curvature of the spine	47	11.87	39	12.32	1	1.95	40	10.87	7	25.00
General diseases	43	10.86	37	11.69	5	9.73	42	11.41	1	3.57
Weakness of mind	42	10.61	36	11.37	4	7.78	40	10.87	2	7.14
Hemorrhoids	42	10.61	31	9.79	3	5.84	34	9.24	8	28.57
Diseases of the digestive system	31	7.83	26	8.21	1	1.95	27	7.34	4	14.29
Diseases of the circulatory system	21	5.30	19	6.00	1	1.95	20	5.43	1	3.57
Varicocele	16	4.04	14	4.42	1	1.95	15	4.08	1	3.57
Overweight and obesity	13	3.28	9	2.84	3	5.84	12	3.26	1	3.57
Under height	12	3.03	10	3.16	1	1.95	11	2.99	1	3.57
Physical debility	5	1.26	5	1.58	....	....	5	1.36	....	....
Over height	2	.51	2	.63	....	....	2	.54	....	....
Injuries	127	32.07	108	34.11	10	19.46	118	32.07	9	32.14
Rejected for causes, physical and mental	3,194	806.57	2,648	836.39	317	616.73	2,965	805.71	229	817.86
Rejected for causes not physical	766	193.43	518	163.61	197	383.27	715	194.29	51	182.14
Total rejected	3,960	1,000.00	3,166	1,000.00	514	1,000.00	3,680	1,000.00	280	1,000.00

This year as last the diseases causing the greatest number of rejections were as follows in the order named: Venereal diseases, heart disease, defective hearing, defective vision, and flat feet. The number per 1,000 rejected for the last four causes was about the same in 1912 as in 1911. Venereal diseases, which caused the largest proportion of rejections, was lower than 1911, being in 1912, 97.73 as compared with 111.67 in 1911. In the white race, venereal diseases caused the second highest number of rejections, being 92.39 per 1,000, while heart disease caused 95.11. In the colored race, however, the rate for venereal diseases was 167.86 per 1,000. This was lower, however, than in 1911, when it was 221.65. Table No. 58 shows the principal occupations of 24,489 recruits enlisted during the year:

TABLE No. 58.—*Principal occupations of recruits, first enlistment, year 1912.*

Occupation.	Number in each case.			Occupation.	Number in each case.		
	Total.	White.	Colored.		Total.	White.	Colored.
Laborers	5,332	4,509	823	Leather workers	29	28	1
Farmers	2,709	2,633	76	Cigar makers	27	27	....
Clerks	963	959	4	Core makers	27	26	1
Drivers and stablemen	905	839	66	Draftsmen	26	26	....
Machinists	622	615	7	Furniture workers	26	26	....
Miners	516	498	18	Civil engineers	23	23	....
Cooks	408	319	89	Merchants	23	22	1
Carpenters	400	386	14	Cement workers	21	18	3
Firemen	382	358	24	Bridge workers	18	18	....
Painters	356	348	8	Photographers	17	17	....
Electricians	278	270	8	Foremen	17	16	1
Plumbers	246	243	3	Packers	16	14	2
Musicians	243	229	14	Confectioners	16	16	....
Printers	229	224	5	Actors	16	15	1
Waiters	218	147	71	Gardeners	16	16	....
Barbers	209	188	21	Undertakers	16	14	2
Railroad hands	202	182	20	Box makers	15	15	....
Tailors	173	161	12	Drillers	14	12	2
Butchers	160	155	5	Hatters	13	13	....
Salesmen	160	160	....	Laundrymen	13	10	3
Porters	158	49	109	Coopers	12	12	....
Chauffeurs	154	133	21	Journalists	11	10	1
Metal workers	151	149	2	Bartenders	11	10	1
Bakers	147	141	6	Rubber workers	11	11	....
Blacksmiths	126	113	13	Dairymen	11	11	....
Shoemakers	124	121	3	Doctors	11	9	2
Bookkeepers	111	111	....	Trimmers	11	11	....
Telegraphers	112	112	....	Florists	10	10	....
Sailors	99	94	5	Lithographers	10	10	....
Weavers	97	97	....	Oilers	10	10	....
Engineers	94	93	1	Roofers	10	10	....
Linemen	83	82	1	Inspectors	9	9	....
Masons (brick and stone)	81	73	8	Agents	8	7	1
Molders	74	62	12	Chemists	8	8	....
Mill workers	74	74	....	Collectors	8	8	....
Tinners	71	70	1	Automobile workers	7	7	....
Mechanics	94	92	2	Bottlers	7	6	1
Students	61	59	2	Brewers	6	6	....
Boilermakers	56	56	....	Potters	7	6	1
Horseshoers	49	49	....	Dyers	7	7	....
Teachers	48	46	2	Designers and decorators	6	6	....
Motormen	48	48	....	Fishermen	6	4	2
Druggists	45	43	2	Ball players	6	6	....
Nurses	45	45	....	Dentists	6	6	....
Glass workers	43	42	1	Moving-picture operators	6	6	....
Lumbermen	42	40	2	Upholsterers	6	6	....
Jewelers	35	35	....	Miscellaneous	129	128	1
Stenographers	33	33	....				
Plasterers	33	27	6	Total	17,897	16,382	1,515
Paper workers	30	29	1				
Conductors	29	29	....				

PHILIPPINE SCOUTS.

The following is from General Order No. 1, Headquarters Philippines Division, Manila, P. I., January 1, 1910:

The physical examination of recruits for the Philippine Scouts will be conducted in accordance with the authorized manual for the examination of recruits, except as hereinafter specified. It will include examination for filarial disease, and any applicant afflicted therewith will be rejected.

No recruit for the Scouts will be accepted for enlistment who is under 59 inches in height or 100 pounds in weight.

The following table will be used in determining the minimum allowable weight and chest measurements relative to height:

Table of physical proportions for height, weight, and chest measurements.

Height.	Weight.	Chest measurement (at expiration).
Ft. in.	*Pounds.*	*Inches.*
4$\frac{11}{12}$=59	100	28½
5 =60	101	28¾
5$\frac{1}{12}$=61	102	29
5$\frac{2}{12}$=62	103	29¼
5$\frac{3}{12}$=63	105	29½
5$\frac{4}{12}$=64	107	29¾
5$\frac{5}{12}$=65	110	30
5$\frac{6}{12}$=66	113	30¼
5$\frac{7}{12}$=67	118	30½
5$\frac{8}{12}$=68	124	30¾
5$\frac{9}{12}$=69	127	31
5$\frac{10}{12}$=70	130	31½

Chest measurement at expiration should be taken under conditions of normal respiratory effort. Chest mobility and measurement at inspiration will be taken, but will not be used as data for rejection of a candidate for enlistment, unless they are such as to indicate abnormality or pathological conditions.

In the case of an especially desirable applicant who is active, has firm muscles, and is evidently vigorous and healthy, who varies from the established standard, special authority for the enlistment may be requested from these headquarters.

The results of the examinations of applicants for enlistment in the Philippine Scouts are given in the following table and are of interest as showing the anthropometrical characteristics of the Philippine races. The proportion of recruits accepted to those examined was lower in 1912 than in 1911, being 95.05 per cent as compared with 97.6. The total number examined in 1912 was 870, as compared with 2,296 for 1911.

TABLE No. 59.—*Examination of Philippine applicants for enlistment, year 1912.*

	Number.	Ratio per 1,000 examined.
Examined by medical officers	870	1,000.00
Accepted by medical officers	827	950.57
By first enlistment	353	405.75
Other enlistments	474	544.83
Rejected by medical officers	37	42.53
Declined	6	6.90

TABLE No. 60.—*Philippine recruits (accepted).*

	Number.	Ratio.		Number.	Ratio
18 years and under	10	12.09	31 years	32	38.69
19 years	19	22.97	32 years	19	22.97
20 years	16	19.35	33 years	13	15.72
21 years	126	152.36	34 years	12	14.51
22 years	60	72.55	35 years	18	21.77
23 years	32	38.69	36 years	5	6.05
24 years	114	137.84	37 years	9	10.88
25 years	89	107.62	38 years	5	6.05
26 years	54	65.30	39 years	3	3.63
27 years	60	72.55	40 years and over	5	6.05
28 years	48	58.04			
29 years	43	52.00	Total	827	1,000.00
30 years	35	42.32			

Fifty-six and five-tenths per cent were 25 years of age or under.

TABLE No. 61.—*Philippine recruits—Relation of height to age.*

ABSOLUTE NUMBERS, YEAR 1912.

Height.	Age.									Total.
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	
4 feet, 11 inches						1	2		1	4
5 feet	2		1	4	2		8	4	10	31
5 feet 1 inch	3	2	2	12	4	4	12	10	29	78
5 feet 2 inches		4	2	29	13	4	10	13	46	121
5 feet 3 inches	1	4	4	20	14	4	25	16	83	171
5 feet 4 inches	1	3	1	29	9	7	22	15	72	159
5 feet 5 inches	3	2	4	14	5	5	17	15	41	106
5 feet 6 inches		3	1	8	7	1	11	10	33	74
5 feet 7 inches			1	3	2	4	3	2	24	39
5 feet 8 inches				2		1	2	2	11	18
5 feet 9 inches				3	3		2	1	7	16
5 feet 10 inches		1		2	1	1		1	3	9
5 feet 11 inches and over									1	1
Total	10	19	16	126	60	32	114	89	361	827

PROPORTIONATE NUMBERS, YEAR 1912.

Height.	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
4 feet 11 inches						31.25	17.54		2.77	4.84
5 feet	200.00		62.50	31.75	33.33		70.18	44.95	27.70	37.48
5 feet 1 inch	300.00	105.26	125.00	95.24	66.67	125.00	105.26	112.36	80.33	94.31
5 feet 2 inches		210.53	125.00	230.16	216.67	125.00	87.72	146.07	127.42	146.30
5 feet 3 inches	100.00	210.53	250.00	158.73	233.33	125.00	219.30	179.78	229.92	206.77
5 feet 4 inches	100.00	157.89	62.50	230.16	150.00	218.75	192.98	168.54	199.45	192.26
5 feet 5 inches	300.00	105.26	250.00	111.11	83.33	156.25	149.12	168.54	113.57	128.17
5 feet 6 inches		157.89	62.50	63.50	116.67	31.25	96.50	112.36	91.42	89.48
5 feet 7 inches			62.50	23.81	33.33	125.00	26.32	22.47	66.48	47.16
5 feet 8 inches				15.87		31.25	17.54	22.47	30.47	21.77
5 feet 9 inches				23.81	50.00		17.54	11.24	19.39	19.35
5 feet 10 inches		52.63		15.87	16.67	31.25		11.24	8.31	10.88
5 feet 11 inches and over									2.77	1.21
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Forty-eight and nine-tenths per cent of all recruits were 5 feet 3 inches or less, which is below the minimum standard for American soldiers. Five and three-tenths per cent were above the average height of American recruits.

TABLE No. 62.—*Philippine recruits—Relation of weight to age.*

ABSOLUTE NUMBERS, YEAR 1912.

Weight.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under	3	2	1	4	1	....	2	2	8	23
100 to 104 pounds....	1	4	2	19	7	2	12	3	22	72
105 to 109 pounds...	2	4	2	20	16	5	12	17	45	123
110 to 114 pounds....	1	3	3	27	11	1	17	19	60	142
115 to 119 pounds....	1	4	5	25	8	9	20	16	73	161
120 to 124 pounds....	....	2	1	19	7	7	17	10	54	117
125 to 129 pounds....	....	....	1	6	3	3	12	5	48	78
130 to 134 pounds....	1	....	1	2	2	4	14	11	22	57
135 to 139 pounds....	....	....	....	3	2	1	5	3	14	28
140 to 144 pounds....	1	....	....	1	2	....	2	2	7	15
145 to 149 pounds....	....	....	....	....	....	....	1	....	3	4
150 to 154 pounds....	....	....	....	....	....	....	....	....	2	2
155 to 159 pounds....	....	....	....	....	1	....	....	....	2	3
160 pounds and over.	....	....	....	....	....	....	....	1	1	2
Total.........	10	19	16	126	60	32	114	89	361	827

PROPORTIONAL NUMBERS, YEAR 1912.

Weight.	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
99 pounds and under	300.00	105.26	62.50	31.75	16.67	....	17.54	22.47	22.16	27.81
100 to 104 pounds....	100.00	210.53	125.00	150.79	116.67	62.50	105.26	33.71	60.94	87.06
105 to 109 pounds....	200.00	210.53	125.00	158.73	266.67	156.25	105.26	191.01	124.65	148.73
110 to 114 pounds....	100.00	157.89	187.50	214.29	183.33	31.25	149.12	213.48	166.20	171.70
115 to 119 pounds....	100.00	210.53	312.50	198.41	133.33	281.25	175.44	179.78	202.22	194.68
120 to 124 pounds....	....	105.26	62.50	150.79	116.67	218.75	149.12	112.36	149.58	141.47
125 to 129 pounds....	....	....	62.50	47.62	50.00	93.75	105.26	56.18	132.96	94.31
130 to 134 pounds....	100.00	....	62.50	15.87	33.33	125.00	122.81	123.60	60.94	68.92
135 to 139 pounds....	....	....	....	23.81	33.33	31.25	43.86	33.71	31.58	33.86
140 to 144 pounds....	100.00	....	....	7.94	33.33	....	17.54	22.47	19.39	18.14
145 to 149 pounds....	....	....	....	....	....	....	8.77	....	8.31	4.84
150t o 154 pounds....	....	....	....	....	....	....	....	....	5.54	2.42
155 to 159 pounds....	....	....	....	....	16.67	....	....	....	5.54	3.63
160 pounds and over.	....	....	....	....	....	....	....	11.24	2.77	2.42
Total.........	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

It will be observed that the weight of 86.6 per cent of all recruits is 128 pounds or under, the minimum standard for American recruits. Only 1.3 per cent were the average weight of American recruits or above the average weight.

TABLE No. 63.—*Philippine recruits—Relation of chest measurement to age.*

ABSOLUTE NUMBERS, YEAR 1912.

Chest measurement.	Age.									
	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under										
27 inches	2									2
28 inches	1		2	6		1	4	1	4	19
29 inches	2	6	4	16	6	3	8	12	36	93
30 inches	2	3	3	38	19	3	26	23	71	188
31 inches	1	10	4	31	14	8	29	23	96	216
32 inches	2		2	22	8	12	26	12	75	159
33 inches				9	8	4	15	17	52	105
34 inches			1	3	1	1	2	1	20	29
35 inches				1	2		3		1	7
36 inches and over					2		1		6	9
Total	10	19	16	126	60	32	114	89	361	827

PROPORTIONAL NUMBERS, YEAR 1912.

Chest measurement.	18 years and under.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.	26 years and over.	Total.
26 inches and under										
27 inches	200.00									2.42
28 inches	100.00		125.00	47.62		31.25	35.09	11.24	11.08	22.97
29 inches	200.00	315.79	250.00	126.98	100.00	93.75	70.18	134.83	99.72	112.45
30 inches	200.00	157.89	187.50	301.59	316.67	93.75	228.07	258.43	196.68	227.33
31 inches	100.00	526.32	250.00	246.03	233.33	250.00	254.39	258.43	265.93	261.18
32 inches	200.00		125.00	174.60	133.33	375.00	228.07	134.83	207.78	192.26
33 inches				71.43	133.33	125.00	131.58	191.01	144.04	126.96
34 inches			62.50	23.81	16.67	31.25	17.54	11.24	55.40	35.07
35 inches				7.94	33.33		26.32		2.77	8.46
36 inches and over					33.33		8.77		16.62	10.88
Total	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

The minimum standard chest measure for American recruits is 32 inches at expiration. Sixty-two and six-tenths per cent of all Philippine recruits have a chest measurement below this standard.

Table No. 64 gives the causes for rejection among the 870 applicants for enlistment examined by medical officers during the year.

TABLE No. 64.—*Causes of rejection of Philippine applicants for enlistment, year 1912.*

	Total.			Total.	
	Number.	Ratio per 1,000 rejected for all causes.		Number.	Ratio per 1,000 rejected for all causes.
Tuberculosis	10	270.70	Diseases of the ear	1	27.03
Venereal diseases	3	81.08	Diseases of the respiratory system	1	27.03
Diseases of the digestive system	3	81.08	Diseases of the organs of locomotion	1	27.03
Under weight	3	81.08	Under height	1	27.03
Chest development insufficient	3	81.08	Defects of development	1	27.03
Defects of vision	3	81.08	Causes not physical	1	27.03
General diseases	2	54.05			
Varicose veins	2	54.05	Total	37	1,000.00
Heart disease	2	54.05			

Ten were rejected for tuberculosis in 1912 and 5 in 1911; 3 for venereal disease in 1912 and 10 in 1911; 3 for diseases of the digestive system in 1912 and 11 in 1911. Although the standard for weight is low, 3 out of the 37 rejections were for under weight in 1912.

PORTO RICAN TROOPS.

Seventy-seven and two-tenths per cent of the recruits for the Porto Rican regiment examined by medical officers were accepted, as compared with 79.5 per cent in 1911. Three hundred and sixteen applicants were examined and 244 accepted. Of the accepted applicants 55.3 per cent were 25 years of age or under. In height 56.5 per cent were 66 inches or under and only 30 reached the height of 69 inches; 74.2 per cent were under the average height of American recruits. Forty-three and four-tenths per cent weighed less than 130 pounds, and 30 weighed 150 pounds or over. Sixty-five and seven-tenths had a chest measurement of 33 inches or under, and 14.7 per cent had a chest measurement of 35 inches or over, as compared with 13.2 per cent for last year.

TABLE No. 65.—*Causes of rejection of applicants for enlistment, Porto Rican regiment, year 1912.*

	Total.			Total.	
	Number.	Ratio per 1,000 rejected for all causes.		Number.	Ratio per 1,000 rejected for all causes.
Under weight	16	225.35	Heart disease	2	28.17
Flat feet	8	112.68	Diseases of the respiratory system	2	28.17
Chest development	8	112.68	Over weight and obesity	2	28.17
Defects of development	7	98.59	Causes not physical	2	28.17
Defects of vision	6	84.51	Diseases of the organs of locomotion	1	14.08
Venereal diseases	3	42.25	Diseases of the skin	1	14.08
Defective teeth	3	42.25	Varicose veins	1	14.08
Hernia	3	42.25			
Diseases of the genito-urinary system	3	42.25			
Under height	3	42.25	Total	71	1,000.00

Twenty-two and five-tenths per cent of the rejections were caused by a deficiency in weight, 11.3 by flat feet, and the same number by insufficient chest development; 9.9 by defects of development and 8.5 per cent by defects of vision. Venereal diseases caused 4.2 per cent of rejections as compared with 2.4 per cent in 1911.

CONCLUSION.

This report is the last which will be signed by the present Surgeon General, on account of his retirement for age during the current fiscal year, after an incumbency of five years four and one-half months. It seems advisable, therefore, that a brief summary be made of the work done by the Medical Department and of the results obtained under his administration.

1. Typhoid fever, the most formidable of all camp diseases in the past, has apparently practically ceased to be a cause of noneffectiveness in our Army. This as is well known is the brilliant result of the immunization of our Army against this disease by the typhoid

prophylactic. It was demonstrated in the maneuver camp at San Antonio in 1911 that it was entirely practicable to immunize a division upon mobilization without materially interfering with the military duties. The same can be done for any number of divisions. Thus if at any time it becomes necessary to mobilize a large army of militia and volunteers they can be properly protected against this disease in a short time after arrival in camp.

The first steps in this campaign were inaugurated by my predecessor, Gen. O'Reilly, in the latter part of 1908, and has been conducted to the present stage by the Medical Corps during my incumbency. I consider that, among the sanitary achievements of the Medical Department in preventive medicine, this measure for the prevention of this disease ranks second in importance only to the discovery of the method of transmission of yellow fever.

2. It appears, as stated elsewhere in this report, that at last effective measures have been instituted to control the occurrence of venereal diseases. Practically the first note of this campaign was sounded in a circular letter from this office January 25, 1909. Since that time a vigorous campaign has been conducted, interest throughout the Medical Department and the Army at large has been aroused. The War Department was finally persuaded to take official action in 1912, and Congress, at the suggestion of this office, passed the act for the stoppage of pay in 1912. The statistics for the year 1912 and for the first six months of 1913 show that the results obtained are eminently satisfactory and would indicate that we may hope for still more satisfactory results in the future. Great credit is due to certain enthusiastic medical officers for especially good work done during this campaign.

3. Prior to the year 1910 among the native troops in the Philippine Islands, beriberi each year caused a large number of admissions to sick report and much noneffectiveness. This disease was also responsible for the greatest number of deaths, and was second only to tuberculosis as a cause for discharge for disability. Experiments conducted by several observers, and confirmed by the board for the study of tropical diseases in the Philippine Islands, showed that beriberi occurred among peoples subsisting largely on highly-milled rice. As a result of recommendations by the board, orders were issued by the division commander and later by the War Department prescribing that only unpolished rice be issued and that a legume be added to the ration. Following the change in the ration beriberi has practically disappeared from among these troops. Only three cases occurred in 1911 and two in 1912.

4. As the result of constantly improving sanitary measures, the constantly noneffective and admission rates have steadily declined since the Spanish-American War. During the last few years as the result of the antityphoid and venereal campaigns these rates have decreased more rapidly, and in 1912 were the most satisfactory on record. This year, 1913, bids fair to eclipse all records and it would seem at the present time that these rates this year would reach an almost irreducible minimum.

5. Camp sanitation has been improved, simplified, and rendered inexpensive. It is being demonstrated each day that troops properly protected against typhoid fever and smallpox can live in camps suitably located, with the present method of camp sanitation, for an indefinite length of time with no increase in morbidity or mortality.

6. The mobilization of the maneuver division at San Antonio in 1911, first brought into evidence the remarkable progress which has been made by the Medical Department in organization since the Spanish-American War. There for the first time a division appeared with a complete modern sanitary organization and with its full quota of field hospitals and ambulance companies in addition to the regimental medical service. The full-field medical equipment was on the field before all of the troops had arrived.

7. The act of Congress of April 23, 1908, reorganizing the Medical Corps authorized the Medical Reserve Corps. The enrollment of civilian physicians in this corps, begun by my predecessor, has been continued during my administration. On June 30, 1913, there were enrolled in this corps 105 physicians on the active list and 1,100 on the inactive list. Included in this list are many of the most prominent medical men in this country. When the division was mobilized, at San Antonio in 1911, it was found that in nearly every instance it was necessary to leave a medical officer at each post to care for the sick left behind. It was then decided that a reserve corps commission should be issued to some civilian physician in the immediate vicinity of each post who could be called in in an emergency at any time. It is now practicable to order all medical officers on duty at the posts at once into the field, the sick remaining being cared for by the Medical Reserve Corps officers.

It was demonstrated that this plan is very satisfactory when the Second Division was mobilized at Texas City and Galveston in February, 1913.

8. An act of Congress of March 3, 1911, which had been proposed by this office, reorganized the Dental Corps of the Army. This corps when filled will furnish a sufficient number of dentists to perform fairly satisfactorily the dental work required in the Army.

9. The Army appropriation bill for the fiscal year ended June 30, 1911, partially reorganized the Army Nurse Corps. The pay was increased. The favorable influence of this legislation was soon shown, for on June 1, 1910, even before the increase in pay became effective, the corps was filled to its maximum strength of 100, which had not been done before since August 1, 1907. The number was increased July 1, 1911, to 125, and the last Army appropriation bill increased this number to 150. There are now in the service over 130.

FINANCIAL STATEMENT, 1913.[1]

Medical and hospital department, 1913.

Appropriated by act approved Aug. 24, 1912		$700,000.00
Refundments during the year		183.75
Total to be accounted for		700,183.75
Disbursed during the year:		
Expenses of medical supply depots	$1,007.72	
Medical and hospital supplies	408,507.66	
Medical attendance and medicines (except at recruiting stations)	12,292.24	
Medical expenses of recruiting (including medical attendance and medicines at recruiting stations)	6,099.46	
Pay of employees	142,846.20	

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[1] The "disbursements" in this statement include settlements with public creditors made by the accounting officers of the Treasury and charged by them to these appropriations.

Disbursed during the year—Continued.		
Hospital laundry	$39,356.37	
Expressage	1,184.50	
Gas and electricity for laboratory apparatus, etc.	1,415.04	
Customs duties and internal-revenue taxes on medical supplies	325.80	
Miscellaneous	102.93	
		$613,137.92
Balances on hand June 30, 1913:		
In the United States Treasury	12,639.45	
In transit from disbursing officers to the Treasury	1,314.24	
In hands of disbursing officers—		
New York City	28,076.76	
Washington, D. C.	21,112.70	
St. Louis, Mo.	5,747.04	
San Francisco, Cal.	2,886.60	
Honolulu, Hawaii	745.54	
Manila, P. I.	14,523.50	
		87,045.83
Total accounted for		700,183.75

Medical and hospital department, 1912.

Balances on hand July 1, 1912, act Mar. 3, 1911		152,056.89
Refundments during the year		5.31
Total to be accounted for		152,062.20
Disbursed during the year:		
Expenses of medical supply depots	$325.12	
Medical and hospital supplies	91,061.60	
Medical attendance and medicines (except at recruiting stations)	3,329.04	
Medical expenses of recruiting	797.00	
Pay of employees	8,356.92	
Hospital laundry	7,401.84	
Expressage	51.71	
Gas and electricity for laboratory apparatus	187.82	
Customs duties and internal-revenue taxes on medical supplies	154.20	
Miscellaneous	7.04	
		111,672.29
Balance on hand June 30, 1913, in United States Treasury		40,389.91
Total accounted for		152,062.20

Medical and hospital department, 1911.

Balance on hand July 1, 1912, act Mar. 23, 1910		599.40
Disbursed during the year:		
Medical attendance (not at recruiting stations)	$76.00	
Gas and electricity for laboratory apparatus	142.50	
		218.50
Carried to surplus fund		380.90
Total accounted for		599.40

Medical and hospital department, certified claims.

Appropriated by act approved Aug. 26, 1912		66.35
Disbursed during the year:		
Medical attendance at recruiting stations, fiscal year 1908	$26.35	
Professional examination of candidates for commissions as medical officers, United States Volunteers, fiscal year 1898	40.00	
		66.35

Replacing medical supplies, 1913–14 (act June 12, 1906, 34 Stats., 256).

Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Quartermaster's Department, and Quartermaster Corps, U. S. Army	$381.64	
To Engineer Department, U. S. Army	87.00	
To Insular Bureau, War Department	150.00	
To Isthmian Canal Commission	10,498.40	
To Navy and Marine Corps	3,754.65	
To Public Health Service	2.00	
To Reclamation Service	169.65	
To Indian Service	16.50	
To States, for the use of the militia	23,098.43	
		$38,158.27
B. On account of supplies sold—		
To States, for the use of the militia	1,599.23	
To Civil Government, Philippine Islands	3.82	
To U. S. Soldiers' Home	12,997.03	
To American National Red Cross	57.81	
To civilian employees and civilians	7,099.30	
		21,757.19
C. On account of collections from carriers and others for medical property lost or destroyed		1,024.82
Total to be accounted for		60,940.28
Balance on hand June 30, 1913, in United States Treasury		60,940.28

Replacing medical supplies, 1912–13.

Balance on hand July 1, 1912		75,414.86
Amounts accruing to this fund:		
A. On account of supplies transferred—		
To Quartermaster's Department, U. S. Army	$20.91	
To Engineer Department, U. S. Army	.50	
To Isthmian Canal Commission	534.38	
To Navy and Marine Corps	1,256.90	
To relief of flood sufferers, Ohio and Mississippi valleys	4,408.07	
To States, for the use of the militia	22,729.84	
		28,950.60
B. On account of supplies sold—		
To States, for the use of the militia	6.25	
To civilian employees and civilians	1,876.01	
		1,882.26
C. On account of collections from carriers and others for medical property lost or destroyed		217.06
Total to be accounted for		106,464.78
Disbursed during the year for medical and hospital supplies		98,959.09
Balances on hand June 30, 1913:		
In United States Treasury	$2,164.83	
In hands of disbursing officer, Washington, D. C.	5,340.86	
		7,505.69
Total accounted for		106,464.78

Replacing medical supplies, 1911–12.

Balance on hand July 1, 1912	17,535.54
Disbursed during the year for medical and hospital supplies	8,273.60
Balance on hand in United States Treasury June 30, 1913	9,261.94

Replacing medical supplies, 1910-11.

Balance on hand July 1, 1912	$35.59
Carried to surplus fund	35.59

Replacing medical supplies destroyed by fire 1910-11.

Balance on hand July 1, 1912, act June 25, 1910	213.18
Disbursed during the year for medical and hospital supplies	207.00
Carried to surplus fund	6.18

Library, Surgeon General's Office, 1913.

Appropriated by act approved Aug. 24, 1912		10,000.00
Disbursed during the year		6,183.33
Balances on hand June 30, 1913:		
In United States Treasury	$1,645.34	
In hands of disbursing officer, Washington, D. C.	2,171.33	
		3,816.67

Library, Surgeon General's Office, 1912.

Balance on hand July 1, 1912, act Mar. 3, 1911	3,203.81
Disbursed during the year	3,184.19
Balance in United States Treasury June 30, 1913	19.62

Library, Surgeon General's Office, 1911.

Balance on hand July 1, 1912, act Mar. 23, 1910	121.33
Carried to surplus fund	121.33

Army Medical Museum, 1913.

Appropriated by act approved Aug. 24, 1912		5,000.00
Disbursed during the year		3,411.44
Balances on hand June 30, 1913:		
In United States Treasury	$600.00	
In hands of disbursing officer, Washington, D. C.	988.56	
		1,588.56

Army Medical Museum, 1912.

Balance on hand July 1, 1912, act Mar. 3, 1911	1,230.34
Disbursed during the year	1,136.23
Balance in United States Treasury June 30, 1913	94.11

Army Medical Museum, 1911.

Balance on hand July 1, 1912, act Mar. 23, 1910	423.80
Carried to surplus fund	423.80

Artificial limbs, 1913.

Appropriated by act approved Aug. 24, 1912		115,000.00
Disbursed during the year		99,579.24
Balances on hand June 30, 1913:		
In United States Treasury	$9,874.76	
In hands of disbursing officer, Washington, D. C.	5,546.00	
		15,420.76

Artificial limbs, 1912.

Balance on hand July 1, 1912, act Mar. 3, 1911		$38,418.67
Disbursed during the year		1,761.13
Balance in United States Treasury June 30, 1913		36,657.54

Artificial limbs, 1911.

Balance on hand July 1, 1912, act June 25, 1910		15,681.41
Refundment during the year		7.00
Total to be accounted for		15,688.41
Carried to surplus fund		15,688.41

Artificial limbs, certified claims.

Appropriated by act approved Aug. 26, 1912		75.70
Disbursed during the year		75.70

Appliances for disabled soldiers, 1913.

Appropriated by act approved Aug. 24, 1912		2,000.00
Disbursed during the year		837.22
Balances on hand June 30, 1913:		
In United States Treasury	$1,100.00	
In hands of disbursing officer, Washington, D. C.	62.78	
		1,162.78

Appliances for disabled soldiers, 1912.

Balance on hand July 1, 1912, act Mar. 3, 1911		1,096.88
Disbursed during the year		64.70
Balance in United States Treasury June 30, 1913		1,032.18

Appliances for disabled soldiers, 1911.

Balance on hand July 1, 1912, act June 25, 1910		945.90
Carried to surplus fund		945.90

Trusses for disabled soldiers, 1913.

Appropriated by act approved Aug. 24, 1912		5,000.00
Disbursed during the year		2,385.95
Balances on hand June 30, 1913:		
In United States Treasury	$2,400.00	
In hands of disbursing officer, Washington, D. C.	214.05	
		2,614.05

Trusses for disabled soldiers, 1912.

Balance on hand July 1, 1912, act Mar. 3, 1911		2,264.62
Disbursed during the year		174.09
Balance in United States Treasury June 30, 1913		2,090.53

Trusses for disabled soldiers, 1911.

Balance on hand July 1, 1912, act June 25, 1910		2,502.30
Carried to surplus fund		2,502.30

General summary of all appropriations.

Balances on hand July 1, 1912	$311,744.52
Appropriated	837,142.05
Proceeds of sales, etc., accruing to replacing funds, act of June 12, 1906 (34 Stats. 256)	91,990.20
Refundments during the year	196.06
Total to be accounted for	1,241,072.83
Disbursed during the year	951,327.97
Carried to the surplus fund	20,104.41
Balances on hand June 30, 1913	269,640.45
Total accounted for	1,241,072.83

VITAL STATISTICS.

The following tables show in detail most of the statistical data upon which the statements in this report are based:

66. Surgical operations performed on American troops.

67. Numerical view of the effect of disease and injury on United States troops serving at home and abroad in the year 1912 as compared with the corresponding data for the year 1911, by races.

68. Admissions to sick report, discharges, and deaths in the Army with ratios per 1,000 of mean strength, in which all available data for the period 1902–1911 is placed in comparison with the year 1912.

69. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, year 1912, for officers and total enlisted, of the Army.

70. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for American troops, of the Army, white, colored, and total, for the year 1912.

71. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1912, United States, continental (excluding Alaska), and separately for white and colored troops serving therein.

72. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the year 1912, enlisted American troops serving in the Philippine Islands.

73. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for enlisted American troops serving in Alaska, Hawaii, and China for the year 1912.

74. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength for enlisted American troops serving in Panama Canal Zone and on Army transports, year 1912.

75. Admissions to sick report, discharges, deaths, and noneffectiveness expressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty at home stations, placed in comparison with the same data for those serving at distant stations, year 1912.

76. Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for Porto Rican native troops, and Philippine scouts (enlisted men) year 1912.

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912.*

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	EYE.											
Extirpation	Penetrating wound of eye	2	2					2				
	Punctured and lacerated wound of eye.	1	1								1	
	Punctured wound of cornea with foreign body in posterior chamber.	1	1					1				
	Atrophy	1	1					1				
	Syphilitic iritis	1	1					1				
Suture of sclera and conjunctiva.	Rupture of eyeball	1	1					1				
Posterior sclerectomy.. 1 Iridectomy 1	Glaucoma	2	2								2	
Simple extraction	Cataract	1	1								1	
Partial tenotomy internal recti.	Strabismus convergent alternating both eyes.	1		1							1	
Tenotomy complete internal rectus.	Strabismus internal	1	1								1	
Tenotomy external rectus	Squint alternating divergent.	1	1								1	
Tucking internal rectus	Insufficiency of convergence.	1	1								1	
Advancement internal rectus.	Paralysis internal rectus	1	1					1				
Excision and suture... 10 Resection 1 Excision and burial of stump 3 Transplantation 6 Fuch's operation 1	Pterygium	21	21								21	
Incision and dilatation. 3 Incision and drainage... 2	Dacryo-cystitis	5	5								3	2
Expression and cauterization. 1 Expression 9	Trachoma	10	10					10				
Do	Follicular conjunctivitis	3	3								3	
Curetment	Exuberant granulations	1	1								1	
Cauterization, actual cautery.	Chronic ulcers, ophthalmic, gonorrheal.	1			1						1	
Incision and drainage	Abcess, conjunctival	5	5								5	
Incision and expression. 3 Incision and curetment. 5 Dissection 1	Chalazion	9	9								9	
Incision	Adhesions conjunctival	1		1							1	
Extraction	Foreign body imbedded in cornea.	6	6								5	1
Excision	Meibomian cyst	2	2									2
	Adenoma of lid	1	1								1	
	Lipoma of lid	1	1								1	
	Papilloma of lid	1	1								1	
	Sebaceous cyst of lid	1	1								1	
Extraction of bird shot	Gunshot wound, conjunctiva.	1	1								1	
	EAR.											
Schwartze's operation. 2 Mastoidotomy, curetment and drainage.. 16	Mastoiditis	18	18				5	12		1		
Incision of tympanum. 34 Ossiculectomy and curetment 1 Paracentesis 20	Otitis media	55	52	3			23	6		13	5	8
Incision and drainage	Otitis externa	2	2								2	
Excision	Polypus, aural	2	2					2				
Removal of bony growth	Exostosis	1	1					1				

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	NOSE.											
Resection of septum.... 2 Resection middle turbinal.... 1 Barth's drainage through nostril....... 1	Sinusitis..................	4	4					2			2	
Opening chiseled into both sinuses.	Myiasis larvæ frontal sinus	1	1					1				
Extraction upper second bicuspid......... 1 Extraction upper first molar................ 1 Enlargement of alveolar sinus................. 1	Empyema antrum of Highmore.	3	3					2			1	
Opening of antrum........	Myiasis larvae antrum of Highmore.	1	1					1				
Binnie's plastic operation..	Saddle nose deformity.....	1	1					1				
Excision of deflected portion.............. 3 Section and forcible straightening......... 1 Submucous resection.. 34 Resection of spur...... 1 Ballinger's operation.. 1	Deflection of septum......	40	40					2			38	
Submucous resection......	Deviation of septum......	70	70								70	
Turbinectomy......... 22 Resection of turbinal.. 4 Linear cauterization... 5	Hypertrophy of turbinals..	31	31								31	
Kyle's operation...... 1 Excision middle turbinal.................. 2	Hypertrophic rhinitis.....	3	3					1			2	
Jarvis's operation..... 1 Removal with snare... 12	Polypus..................	13	13								13	
Turbinectomy, partial. 1 Submucous excision... 2 Excision.............. 13	Septal spur...............	16	16					1			15	
Excision with saw and snare.	Bony septal spur..........	4	4								4	
Excision by dissection....	Papilloma anterior nares...	1	1								1	
Excision for laboratory diagnosis.	Papillo-fibroma...........	1	1								1	
Removal with curet and forceps.	Adenoids, post nasal......	18	18					4			2	12
Excision..................	Exostosis.................	1	1								1	
Do..................	Necrosis, bone bridge of nose.	1	1								1	
Resection of skin and subcutaneous tissue.	Atresia partial, nasal openings.	2	2					2				
	MOUTH AND PHARYNX.											
Excision..................	Epithelioma, lower lip....	1	1					1				
Do..................	Papilloma, lower lip.......	1	1					1				
Plastic flap transplantation from nose to roof of mouth.	Cleft palate, mouth and left nostril.	1	1								1	
Curetment................	Alveolar sinus............	1	1					1				
Division of frenum........	Tongue tie................	1		1								1
Adenectomy...............	Adenitis submaxillary (salivary).	1	1					1				
Incision and drainage.....	Abscess, submaxillary.....	6	6					1			2	3
Do..................	Abscess, sublingual.......	1	1				1					
Do..................	Abscess, floor of mouth...	1	1									1
Dissection and curetment.	Calculus of tonsil.........	1	1								1	
Tonsillectomy, complete..	Tonsillitis, hypertrophic..	8	8					5				3
Tonsillectomy............	Tonsillitis................	80	79	1			2	12	1		59	6
Do..................	Hypertrophy of tonsil.....	137	137				4	40	1		88	4

Table No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result. Successful.	Result. Partially successful.	Result. Failure.	Result. Died.	Anesthetic. Chloroform.	Anesthetic. Ether.	Anesthetic. Chloroform and ether.	Anesthetic. Nitrous oxide.	Anesthetic. Local.	Anesthetic. None.
	MOUTH AND PHARYNX—con.											
Incision and evacuation 20 Incision 2½ inches long, anterior border sternomastoid, deep dissection and evacuation 1	Abscess of tonsil	21	21	...	...	...	1	...	...	...	9	11
Incision and drainage	Abscess, peritonsillar	66	66	...	...	...	...	1	...	...	45	20
Do	Ludwig's angina	1	1	...	...	...	...	1	...	...	...	...
Uvulectomy	Elongated uvula	3	3	...	...	...	...	...	...	...	3	...
Adenectomy 12 Curetment 5	Adenoids	17	17	...	...	...	...	7	...	1	9	...
	NECK AND THORAX.											
Tracheotomy	Stricture of larynx	1	1	...	...	...	...	1	...	...	...	...
Do	Laryngitis	1	1	...	...	...	...	...	...	...	1	...
Extirpation, extra capsular 1 Extirpation, right lobe and isthmus 1 Thyroidectomy 1	Goiter	3	2	...	...	1	...	3	...	...	...	...
Do	Goiter, exophthalmic	2	2	...	...	...	...	2	...	...	...	...
Paracentesis 1 Resection of rib 14 Thoracotomy 1	Empyema	16	13	3	...	...	1	6	...	5	4	...
Do	Empyema, tuberculous	1	1	...	...	...	...	...	1	...	...	...
Paracentesis 4 Aspiration 16 Pleurotomy 1	Pleurisy	21	21	...	...	...	...	...	...	...	15	6
Resection of rib and drainage.	Pleurisy, tuberculous	1	...	1	...	...	...	...	...	...	1	...
Paracentesis	Hemathorax	2	2	...	...	...	...	...	...	...	2	...
Aspiration	Lympho-sarcoma, anterior mediastinum.	6	6	...	...	...	...	...	...	...	...	6
Tracheotomy, osteoplastic resection of parietal bones, and ligation of longitudinal sinus.	Gunshot wound of neck and head.	1	1	...	...	...	...	...	...	...	...	1
Extraction of bullet	Gunshot wound of neck	1	...	...	...	1	...	...	...	...	...	1
Closure of wound	Incised wound of neck	1	1	...	...	...	...	...	...	...	...	1
Suturing 1 Aspiration 1	Stab wound of thorax, penetrating.	2	2	...	...	...	...	...	...	...	...	2
	ABDOMEN.											
Laparotomy and repair 1 Gastroenterostomy 1	Ulcer of stomach	2	1	...	...	1	...	2	...	...	...	...
Laparotomy and gastrorrhaphy	Ulcer of stomach with perforation.	1	1	...	...	...	...	1	...	...	...	...
Gastroenterostomy	Ulcer of duodenum	1	1	...	...	...	...	1	...	...	...	...
No-loop posterior gastrojejunostomy (Mayo).	Pyloric stenosis, due to old scar tissue.	1	1	...	...	...	...	1	...	...	...	...
Laparotomy, exploratory	Pyloric ulcer with adhesions.	1	...	1	...	...	...	1	...	...	...	...
Laparotomy	Perforation of typhoid ulcer.	1	...	...	...	1	...	1	...	...	...	...
Do	Tumor, inoperable, epigastric region.	1	...	...	...	1	...	1	...	...	...	...
Abdominal section	Sarcoma, mesenteric glands with metastasis in omentum.	1	1	...	...	...	...	1	...	...	...	...
Paracentesis	Carcinomatosis, abdominal general with ascites.	1	...	1	...	...	...	...	...	...	1	...
Laparotomy for relief of ascites.	Papillary carcinoma whole visceral and parietal peritoneum.	2	2	...	...	...	...	1	...	...	1	...
Laparotomy, exploratory	Tumor involving cecum, appendix and mesentery	1	...	...	1	...	...	1	...	...	...	...

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—**Continued.**

Operation.	Disease or injury.	Cases.	Result. Successful.	Result. Partially successful.	Result. Failure.	Result. Died.	Anesthetic. Chloroform.	Anesthetic. Ether.	Anesthetic. Chloroform and ether.	Anesthetic. Nitrous oxide.	Anesthetic. Local.	Anesthetic. None.
	ABDOMEN—continued.											
Laparotomy and dissection of adhesions.	Intestinal and omental adhesions.		1					1				
Do	Adhesions involving omentum, gall bladder, and adjacent structures, following traumatic laceration of liver.	1	1					1				
Laparotomy, adhesions broken up, and raw surfaces covered with liquid vaseline.	Adhesions, transverse and and descending colon.	1	1					1				
Ileocolostomy	Tuberculous ileum and colon.	1	1					1				
Laparotomy, exploratory 2 Laparotomy and drainage 2	Tuberculous peritonitis	4	4					4				
Ileostomy 1 Formation of fecal fistula 1 Laparotomy and reduction 2	Intestinal obstruction	4	2			2		4				
Laparotomy, exploratory	Aneurism	1			1			1				
Laparotomy and drainage	Internal hemorrhage, due to wagon passing over abdominal and pelvic regions.	1	1					1				
Laparotomy exploratory	Abdominal hemorrhage	1	1					1				
Do 2 Abdominal section, ligation of wound of liver and suture of intestinal perforations 1 Laparotomy 1	Gunshot wound of abdomen.	4	3			1		4				
Laparaotory, exploratory	Stab wound of abdomen	1	1					1				
Laparotomy and drainage	Punctured wounds of abdomen.	1	1								1	
Aspiration 1 Incision and drainage 1 Incision and drainage, trans-pleural route 1	Subphrenic abscess	3	2			1		2	1			
Splenectomy	Banti's disease	1	1					1				
Cholecystotomy 6 Cholecystectomy 3 Cholecystostomy 4	Cholecystitis	13	13					13				
Do 1 Cholecystectomy 1 Removal of gall stones 1	Cholelithiasis	3	3					3				
Laparotomy and drainage 9 Thoracic route, resection of rib 10 Right lumbar, incision 2 Kocher's incision 1 Laparotomy, exploratory 3	Abscess of liver	25	21		2	2		25				
Do	Suspected abscess of liver	2	2					2				
High rectus incision for diagnosis.	Syphilitic liver	1	1					1				
Laparotomy, evacuation blood clot, packing and drainage.	Rupture of liver	1	1					1				
Appendectomy 242 Appendectomy and repair of hernia 1 Laparotomy and drainage of abscess 13 Laparotomy, exploratory 1	Appendicitis	257	249	1		7	21	232	4			

Table No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	ABDOMEN—continued.											
Excision of sinus and removal of stump of appendix.	Appendicular sinus from stump, with irritating ligature from previous operation.	1	1	...	...	...	...	1	...	...	...	...
Laparotomy and freeing of adhesions.	Adhesions following appendectomy.	2	2	...	...	...	...	2	...	...	...	...
Laparotomy and drainage.	Abscess acute following appendectomy.	1	1	...	...	...	...	1	...	...	...	...
Bassini's operation... 182 Bassini's modified operation............. 18 Ferguson's operation. 15 Ferguson's modified operation.......... 6 Halstead's operation. 5 Andrew's operation.. 3 Keen's operation..... 1 Mayo's operation..... 1 McEwen's operation. 1 Operation not stated. 6	Inguinal hernia..........	238	238	...	...	...	8	224	2	...	4	...
Cutting of constricting band.............. 1 Strangulated coil freed and returned to abdomen and fault in wall repaired............ 1	Inguinal hernia, strangulated.	2	2	...	...	...	...	1	...	...	1	...
Bassini's modified operation.	Inguinal hernia, recurrent.	1	1	...	...	...	...	1	...	...	...	...
Bassini's operation........	Femoral hernia..........	2	2	...	...	...	...	1	1	...	...	...
Mayo's operation....... 4 Operation not stated... 3	Ventral hernia (4 following appendectomy).	7	6	...	1	...	1	6	...	...	...	...
Repair of abdominal wall..	Ventral hernia recurrent..	2	2	...	...	...	...	2	...	...	...	...
Ferguson's modified operation.	Protuberant parietal peritoneum due to congenital defect.	1	1	...	...	...	...	1	...	...	...	...
Incision and drainage.....	Abscess iliac fossa.........	1	1	...	...	...	...	1	...	...	...	...
	ANUS AND RECTUM.											
Colostomy.................	Adhesions of rectum......	1	1	...	...	...	...	1	...	...	...	...
Incision and drainage.....	Peri-rectal abscess	5	5	...	...	...	...	...	...	...	5	...
Do................ 43 Incision, curetment, and drainage......... 3	Ischio-rectal abscess.......	46	44	2	...	...	2	17	5	...	14	8
Incision and drainage.....	Abscess of rectum.........	1	1	...	...	...	...	1	...	...	...	...
Incision and curetment....	Ischio-rectal fistula.........	2	2	...	...	...	...	2	...	...	...	...
Thermo-cauterectomy.....	Prolapse of rectum.........	1	1	...	...	...	...	...	1	...	...	...
Excision..................	Polypus of rectum.........	1	1	...	...	...	...	1	...	...	...	...
Excision and curetment............... 13 Excision, curetment, and packing......... 6 Tract laid open with cautery............ 6 Excision and packing. 2 Dissection of tract..... 2 Excision............... 6 Dilatation............. 1 Fistulotomy distal to sphincter........... 1	Fistula in ano.............	37	37	...	...	...	2	33	...	...	2	...

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.		Disease or injury.	Cases.	Result.				Anesthetic.					
				Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
		ANUS AND RECTUM—con.											
Clamp and cautery	72	Hemorrhoids	303	303	...	...	...	34	177	9	...	78	5
Ligation, clamp, and cautery	11												
Ligation and cautery	1												
Excision and cautery	6												
Excision, cautery, and suture	1												
Clamp and suture	2												
Clamp, excision, and suture	1												
Clamp and ligation	1												
Clamp and excision	1												
Excision	23												
Excision and curetment	3												
Excision and ligation	44												
Excision and suture	27												
Incision and removal of clot	25												
Incision and curetment	5												
Incision and ligation	4												
Ligation	6												
Ligation and excision	49												
Allingham's operation	11												
Keller's operation	1												
Pilcher's operation	5												
Thewell-Thomas's operation	1												
Incision and cauterization	3												
Curetment and packing	1	Fissure of anus	7	7	...	...	...	...	6	1	...	...	...
Forcible dilatation	2												
Cauterization	2												
Dilatation and cauterization	2												
Excision		Papilloma circum-anal	1	1	...	...	...	...	1	...	...	...	...
Excision and suture		Condyloma of anus	2	2	...	...	...	...	1	...	...	1	...
		GENITO-URINARY SYSTEM.											
Excision left, and resection right	1	Tuberculosis of testicle	4	4	...	...	...	...	4	...	...	...	...
Orchidectomy	3												
Do		Fibroma of testicle	1	1	...	...	...	...	...	...	...	1	...
Do		Fibro-sarcoma of testicle	1	1	...	...	...	...	1	...	...	...	...
Do		Sarcoma of testicle	2	2	...	...	...	...	2	...	...	...	...
Orchotomy		Carcinoma of testicle	1	...	...	1	...	...	...	1	...	...	...
Do	1	Syphilis of testicle	2	2	...	...	...	...	2	...	...	...	...
Orchidectomy	1												
Do		Orchitis, chronic	2	2	...	...	...	...	2	...	...	...	...
Do	1	Undescended testicle	2	2	...	...	...	...	2	...	...	...	...
Orchotomy	1												
Exploratory incision, cremaster severed.		Retracted testicle	1	1	...	...	...	...	...	...	...	1	...
High excision of veins	107	Varicocele	134	134	...	...	...	5	109	1	...	19	...
Low excision of veins	2												
Resection of veins	3												
Excision of veins, site not stated	11												
Radical cure, open operation	5												
Bennett's operation	1												
Keen's operation	3												
Operation not stated	2												
Resection		Varicocele and redundant scrotum.	1	1	...	...	...	...	1	...	...	...	...

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officer, and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	GENITO-URINARY SYSTEM—continued.											
Inversion of tunic...... 1 Inversion and excision of tunic.............. 9 Excision of sac......... 6 Excision and ligation... 1 Aspiration............. 3 Tapping................ 2 Incision and drainage... 2 Orchidectomy.......... 1 Radical cure........... 2 Incision, tunic stitched to skin, drainage..... 1 Andrews's bottle operation.................. 9 Bassini's operation..... 1 Jaboulay's operation... 9 Loguet's operation..... 2 Valkman's operation... 1 Von Bergmann's operation.................. 3 Incision exploratory.... 1	Hydrocele.................	54	52	1	1	...	4	40	....	....	6	4
Excision..................	Spermatocele..............	1	1	...	...	...	....	1	....	....	....	...
Incision and drainage.....	Hematocele................	1	1	...	...	...	1	....	....	....	....	...
Do................ 3 Aspiration............ 1 Epididymectomy..... 7 Epididymotomy...... 14 Hagner's modified operation.............. 6 Exploratory incision and drainage........ 1	Epididymitis, acute......	32	32	...	...	...	1	19	....	....	10	2
Orchidectomy right, and partial epididymectomy left......... 1 Excision.............. 2	Epididymitis, chronic tuberculous..............	3	3	...	...	...	....	3	....	....	....	...
Scrotum opened, removal of tumor and visceral layer of tunic.	Tumor, type undetermined, tunica vaginalis.	1	1	...	...	...	....	1	....	....	....	...
Excision of contused portion of tunic.	Contusion with hematocele.	1	1	...	...	...	....	1	....	....	....	...
Nephrectomy.............	Nephritis, tuberculous.....	1	1	...	...	...	....	1	....	....	....	...
Do...................	Pyonephrosis............	1	1	...	...	...	....	1	....	....	....	...
Nephrotomy..............	Nephrolithiasis...........	1	1	...	...	...	....	1	....	....	....	...
Suture of bladder.........	Rupture of bladder from fall.	1	.....	...	...	[1] 1	....	1	....	....	....	...
Supra-pubic cystotomy....	Vesical calculus...........	1	1	...	...	...	....	1	....	....	....	...
Do..................	Cystitis, chronic..........	1	1	...	...	...	....	1	....	....	....	...
Do.................. 1 Perineal prostatectomy. 1	Hypertrophy of prostate (1 senile).	2	1	...	...	1	....	2	....	....	....	...
Incision and drainage.....	Abscess of prostate........	3	3	...	...	...	....	1	....	....	2	...
Do..................	Abscess, perineal..........	4	4	...	...	...	....	....	....	....	2	2
Perineal section and evacuation of abscess.	Urethro-rectal fistula......	1	1	...	...	...	....	....	....	....	....	1
Incision..................	Perineal fistula...........	1	1	...	...	...	....	....	....	....	....	1
Dissection and repair......	Urinary fistula............	1	1	...	...	...	....	1	....	....	....	...
Incision and drainage.....	Periurethral abscess.......	12	12	...	...	...	....	2	....	....	9	1
Do..................	Suburethral abscess.......	2	2	...	...	...	....	....	....	....	....	2
Internal urethrotomy .. 1 External urethrotomy.. 3 Rapid dilatation....... 1	Stricture of urethra........	5	5	...	...	...	4	....	....	....	1	...
Excision..................	Polypus of urethra........	1	1	...	...	...	....	....	....	....	1	...

[1] Died 8 days after operation from injury to kidney.

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	GENITO-URINARY SYSTEM—continued.											
Circumcision	Elongated prepuce and redundant prepuce 147 Phimosis and paraphimosis 233 Chancroid 6 Other diseases of foreskin 13 Traumatic phimosis 1	400	400				16	47			334	3
Meatotomy	Constricted meatus	3	3								3	
Incision and drainage	Abscess of scrotum	2	2					1			1	
Curtailment	Relaxed scrotum	1	1					1				
	VASCULAR SYSTEM.											
Ligation and excision	Aneurismal varix occipital region.	1	1					1				
Ligation of vessels	Incised wound of throat	1	1									1
Ligation of artery	Severed palmar arch	1	1					1				
Do	Secondary hemorrhage, brachial artery.	1	1				1					
Incision, removal of large hematoma and packing.	Severed femoral vein	1	1					1				
Schede's varicotomy	Varicose ulcer	1	1					1				
Excision 6 Ligation 2 Multiple ligation 7 Ligation and excision 13 Excision and ligation 1 Trendelenburg's operation 1 Trendelenburg's modified operation 1 Schede's operation 2 Keller's operation 13 Operation not stated 1	Varicose veins	47	46	1			1	40			6	
	NERVOUS SYSTEM.											
Neurectomy, supra orbital nerve.	Neuralgia	1	1								1	
Exploratory, of musculospiral nerve.	Neuritis	1	1								1	
Suturing of severed nerve	Incised wound, severing ulnar nerve.	1	1				1					
	SKIN AND CELLULAR TISSUE.											
Incision and curetment 10 Incision and drainage 370	Abscess	380	379	1			2	20	1	4	206	147
Incision and drainage 75 Multiple incisions 2 Incision and curetment 7 Excision 2	Cellulitis	86	85			[1] 1	7	6	2		58	13
Incision and drainage 19 Incision and curetment 5 Crucial incision 1 Excision 1	Carbuncle	26	26					3			18	5
Incision and drainage	Felon	6	6					1			2	3
Do	Whitlow	2	2				1				1	
Do	Streptococcus infection	4	4				2	1			1	
Do	Erysipelas, phlegmonous, scalp.	1	1						1			
Incision and curetment	Phlegmon	1	1				1					
Do	Pyogenic infection	3	3								3	

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[1] Died of septicemia.

Table No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	SKIN AND CELLULAR TISSUE—continued.											
Incision and curetment. 1 Incision and drainage... 1 Dissection of tract and drainage............ 2 Removal of scar tissue.. 1 Excision and suture.... 1 Curetment............ 3	Sinus....................	9	8	1	...	...	1	7	...	...	1	...
Incision and curetment...	Fistula..................	3	3	...	...	...	1	1	...	...	1	...
Curetment............ 1 Excision............ 1	Ulcer....................	2	2	...	...	...	1	1	...	...	...	...
Do................ 5 Removal by blunt dissection............ 1	Callus....................	6	6	...	...	...	...	4	...	...	1	1
Excision..................	Keloid....................	2	2	...	...	...	...	...	...	...	2	...
Transfixion and constriction.	Nevus....................	1	1	...	...	...	...	1	...	...	...	...
Cicatrix loosened by dissection.	Adherent scar............	1	1	...	...	...	...	...	...	...	1	...
Didot's operation.........	Syndactylism, toes........	1	.....	1	...	...	...	...	...	...	1	...
Extirpation.......... 1 Avulsion............ 1 Von Bergman's operation................ 1 Excision............ 2	Deformed toe nail.........	5	5	...	...	...	...	1	...	...	4	..
Avulsion............ 50 Excision............ 147 Partial excision...... 76 Excision and curetment.............. 2 Anger's operation.... 7 Cotting's operation... 12 Keller's operation.... 17 Von Bergman's operation............... 29 Von Natta's operation 2	Ingrowing toe nail........	342	342	...	...	...	9	6	...	12	302	13
	LYMPHATIC GLANDS.											
Incision and drainage. 448 Incision and curetment.............. 47 Excision with cautery 11 Adenectomy......... 266 Keller's operation.... 4	Adenitis, inguinal venereal.............. 549 Adenitis, inguinal nonvenereal............ 133 Adenitis, inguinal, nature not stated..... 39 Adenitis, sundry locations.............. 24 Adenitis, location and nature not stated... 23 Adenitis, tuberculous, 8	776	776	...	...	...	42	202	13	...	390	129
	MUSCLE TENDONS, FASCIAE, LIGAMENTS, AND BURSAE.											
Tendino-suture............	Incised wound of palm, severing tendons of all fingers.	1	1	...	...	...	...	1	...	...	...	...
Tenorrhaphy..............	Severed tendons...........	6	5	1	...	...	...	1	...	...	1	4
Suturing of muscle.......	Severed muscle............	1	1	...	...	...	1	...	...	...	...	...
Incision, freeing of adhesions and suturing.	Incarceration of tendon in palm.	1	.....	...	1	...	...	1	...	...	...	...
Freeing of adhesions.......	Limitation of flexion, finger.	3	1	...	2	...	...	2	...	...	1	...
Incision of contracted bands of fascia.	Contracture flexor tendons, little finger.	1	.....	...	1	...	...	1	...	...	...	...
Transplantation of tendon by suturing sheath to posterior tissues.	Dislocation forward of peronei tendons caused by fracture of oscalcis.	1	1	...	...	...	...	1	...	...	...	...
Plication of internal lateral ligament.	Relaxed internal lateral ligament.	1	1	...	...	...	...	1	...	...	...	...

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	MUSCLE TENDONS, FASCIAE, LIGAMENTS, AND BURSAE—continued.											
Incision and curetment	Tuberculosis of bursa	1	1				1					
Incision and drainage	Tuberculosis of tendon sheath.	1	1								1	
Tenotomy of flexor tendons.	Hammer toe	10	10					5			5	
Excision	Ossified tendon, adductor longus (rider's bone).	1	1					1				
Excision of bursa 4 Excision of bony enlargement 8 Atypical excision 2 Mayo's operation 8 Keller's operation 4	Bunion	26	26					21	1		4	
Excision of sac 4 Incision and drainage 3 Aspiration 2	Bursitis	9	9					2	1		6	
Excision	Bursa	2	2					1			1	
Do 6 Incision and evacuation 1 Aspiration 1	Ganglion	8	8					4	1		3	
	BONES.											
Trephining and elevation of depressed bone.	Fracture, compound, base of skull.	1	1					1				
Do	Fracture, compound, depressed, of skull.	1	1					1				
Do	Fracture of skull	1	1					1				
Elevation and removal of fragments.	do	1	1					1				
Exploration of cranium	Gunshot wound of head	1	1					1				
Exploratory incision and elevation of depressed fragments.	Fracture depressed region of frontal sinus.	1	1					1				
Radical operation	Fracture depressed of zygoma.	1	1					1				
Incision and elevation	Fracture of malar bone	1	1					1				
Antrum opened and fragments replaced.	Fracture comminuted superior maxilla and malar bones.	1	1					1				
Incision and wiring of fragments.	Fracture lower jaw, median line.	1	1					1				
Wiring of fragments	Fracture lower jaw	5	5				1	4				
Do	Fracture of clavicle	1	1					1				
Excision of beef bone	Nonunion of inserted beef bone in lower maxilla.	1	1					1				
Bone pegging	Fracture ununited inner condyle humerus.	1			1			1				
Removal of bone plug and of ununited fragment.	do	1	1					1				
Curetment of sinus and bone cavity.	Necrosis shaft of humerus	1	1					1				
Incision and drainage	Gumma of humerus	1	1								1	
Correction and wiring	Fracture of radius, with faulty union.	1	1					1				
Resetting and wiring both bones.	Vicious union following fracture forearm.	1	1					1				
Excision of excess of cartilage and partial correction.	Angular deformity following fracture forearm.	1	1					1				
Excision of bony protuberance.	Fracture ununited styloid process ulna.	1	1					1				
Excision of scaphoid	Fracture of carpal scaphoid.	2	2					2				
Complete extirpation of third metacarpal.	Gunshot wound of hand, perforating, with compound comminuted fracture.	1	1									1

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	BONES—continued.											
Trimming of bone and suturing.	Partial amputation of finger.	1	1					1				
Application of Lane plate.	Fracture comminuted femur.	1	1								1	
Do.	"T" fracture of femur.	1	1					1				
Wiring of fragments.	Fracture, compound comminuted, femur.	1	1					1				
Freshening of fragments and resetting.	Fracture of femur, with vicious union.	1	1					1				
Incision and suturing.. 2 Valla's operation....... 1	Fracture of patella.	3	3				1	2				
Incision and drainage, with fixation by plaster.	Fracture, compound, tibia and fibula.	1	1					1				
Application of Lane plate.	Fracture ununited of tibia.	1	1					1				
	Fracture of tibia.	2	2					2				
Do.	Fracture of tibia and fibula	1	1					1				
Exploratory incision.	Fracture of tibia, with delayed union.	1	1					1				
Cavity curetted and filled with bone wax.	Osteomyelitis chronic ulna.	1	1					1				
Subperiosteal resection of entire shaft and cavity filled with mostig-moorhof wax.	Osteomyelitis chronic tibia.	1	1					1				
Removal of sequestrum and curetment.	Osteomyelitis fibula.	1	1					1				
Incision, curetment, and drainage.	Osteoperiostitis.	2	2					2				
Curetment and drainage.	Osteomyelitis head of first metatarsal and base of proximal phalanx.	1		1				1				
Removal of Lane plate.	Irritant foreign body (tibia Lane plate).	1	1					1				
Removal of 2-inch nail from lower third of tibia.	Pain at site of former fracture of tibia due to nail used in splinting fragments.	1	1					1				
Removal of necrotic area.	Necrosis of ulna.	1	1					1				
Do.	Necrosis superior maxilla.	1	1					1				
Incision and drainage.	Necrotic sinus superior maxilla.	1	1					1				
Excision of dead bone.	Necrosis sternum and costo-chrondral articulation.	1	1					1				
Curetment and drainage.	Necrosis tenth and eleventh ribs.	1	1					1				
Incision and curetment.	Necrosis phalanx.	1	1					1				
Do.	Necrosis oscalcis.	2	2					2				
Do.	Necrosis metatarsal.	1	1					1				
Excision of dead bone.	Caries metatarsal.	1	1					1				
Incision and curetment. 2 Incision and drainage... 4	Periostitis.	6	6					3			2	1
Incision and removal of growth.	Periostitis, chronic productive femur.	1	1					1				
Excision.	Painful sesamoid bone, foot.	1	1					1				
Do.	Painful callous from old fracture.	1	1					1				
Sequestrotomy and drainage.	Sequestra, site of old fracture.	2	2					2				
Excision.	Exostosis.	6	6					5			1	
Do.	Osteoma.	1	1					1				
	JOINTS.											
Resection of joint.	Ankylosis elbow joint.	1	1					1				
Freeing of adhesions.... 1 Aspiration and passive motion.............. 1	Ankylosis, partial elbow joint.	3	2	1				3				

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	JOINTS—continued.											
Incision and removal	Loose cartilage elbow joint.	2	2					1			1	
Arthrotomy, posterior, for suspected pus result negative.	Arthritis, chronic, elbow joint.	1	1					1				
Do.	Arthritis, acute, wrist joint	1	1					1				
Incision and reduction	Dislocation both bones elbow.	1	1				1					
Freeing of adhesions and forced massage.	Ankylosis wrist joint	1		1				1				
Resection of joint surfaces.	Ankylosis finger joint	1		1					1			
Excision of joints	Impairment of function, second and third joints, forefinger.	1	1					1				
Reduction and suture	Dislocation compound of thumb.	1	1									1
Suturing of internal lateral ligaments.	Dislocation of knee joint	1	1					1				
Freeing of adhesions	Ankylosis partial, knee joint.	1	1					1				
Exploration of joint 1 Excision of cartilage 4	Detached semilunar cartilage, knee joint	5	3		2			3			2	
Incision, removal of villous material and moderate plication of joint 1 Aspiration 1 Arthrotomy and excision of villi 2	Synovitis, knee joint	4	3		1			3			1	
Excision of exostosis 3 Mayo's operation 8 Exploratory operation 1	Hallux valgus	12	11	1				12				
Resection of metatarsal	Ankylosis following operation for hallux valgus.	1	1					1				
Excision metatarso-phalangeal articulation.	Ankylosis, toe	1	1					1				
Division of flexor tendon and excision of extremity of phalanx 1 Resection of bone 3	Hammer toe	4	4				1	2			1	
	AMPUTATIONS.											
Amputation at shoulder	Gangrene of arm	1				1		1				
Amputation, arm, junction upper and middle thirds.	Gunshot wound of arm	1	1				1					
Amputation, arm, lower third.	Incised wound, elbow	1	1				1					
Amputation, hand	Crushing of hand	1	1				1					
Amputation, thigh, junction upper and middle thirds.	Fracture compound of femur with laceration of soft parts.	1	1				1					
Amputation, thigh, lower third.	Fracture comminuted thigh.	1	1								1	
Amputation, thigh, intercondyloid.	Gangrene of leg	1	1				1					
Amputation, leg, middle third.	....do	1			1			1				
Do	Moist gangrene after gunshot wound.	1	1									1
Do 1 Amputation, leg, site not stated 1	Crushing of leg	2	1			1	1	1				
Do	Osteo-sarcoma tibia	1	1					1				
Do	Ulcer, mixed infection, middle and lower thirds of leg, and ankle.	1				1		1				
Amputation, leg, junction upper and middle thirds.	Crushing of ankle	1	1					1				

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	AMPUTATIONS—continued.											
Amputation, foot	Gangrene, great toe	1	1	...	...	...	...	1	...	...	...	...
Disarticulation of index and middle fingers.	Dry gangrene due to severe lye burn.	1	32	...	...	...	2	16	...	...	12	2
Trimming and suturing of stumps and disarticulation, third proximal phalanx.	Amputation traumatic, all fingers left hand at proximal phalangal articulation.	1										
Amputation, mutilated third, fourth, and fifth metacarpo-phalangeal joints, and second finger at middle first phalanx.	Laceration severe, metacarpo-phalangeal junction with destruction of all soft tissues.	1										
Amputation of finger	Gunshot wound of finger	11										
Do	Other injury	13										
Do	Painful stump	3										
Do	Osteitis	1										
Do	Suppurative tuberculosis	1										
Amputation of toe	Injury to toe	2	35	...	...	...	...	25	...	...	10	...
	Displacement of toe	1										
	Partial dislocation of toe	1										
	Hammer toe	27										
	Other deformity of toe	2										
	Sloughing severe of toe	1										
	Gangrene of toe	1										
	FOREIGN BODIES.											
Incision and extraction (1 failure).	Shell of cartridge	2	36	...	2	...	1	12	...	...	17	8
Extraction	Button wire (primer)	1										
Exploratory incision, foreign body not found.	Portion of fishhook	1										
Extraction	Piece of steel	2										
Incision and extraction	Fragment of cartridge	1										
Do	Bullet	12										
Extraction	Bird shot	2										
Incision and removal	Piece of lead	1										
Do	Piece of needle	4										
Do	Other foreign body	12										
	TUMORS.											
Excision	Epithelioma	1	1	...	...	...	...	1	...	...	...	...
Resection horizontal ramus; portion of beef femur inserted in gap as prosthesis.	Sarcoma, inferior maxilla	1	1	...	...	...	...	1	...	...	...	...
Amputation of breast	Adeno-fibroma	1	1	...	...	...	...	1	...	...	...	...
Incision and cauterization. 1 Incision and curetment. 2	Dermoid cyst	3	3	...	...	...	...	1	...	...	2	...
Excision	Cyst	4	4	...	...	...	...	1	...	...	3	...
Incision and drainage	Cystic tumor	2	2	...	...	...	...	...	...	...	2	...
Extirpation	Calcified lymph node	1	1	...	...	...	...	...	...	...	1	...
Excision. 3 Dissection. 1	Fibroma	4	4	...	...	...	...	2	...	...	2	...
Excision	Fibro-lipoma	2	2	...	...	...	...	...	...	...	2	...
Do	Fibro-myoma	1	1	...	...	...	...	1	...	...	...	...
Do. 11 Dissection. 2 Incision and enucleation. 2 Removal of growth and suturing. 1 Amputation of breast, Warren's operation. 1	Lipoma	17	17	...	...	...	...	4	...	...	13	...
Excision	Papilloma	4	4	...	...	...	...	...	...	...	4	...
Do	Osteoma	2	2	...	...	...	...	2	...	...	...	...

TABLE No. 66.—*Surgical operations performed by officers of the Medical Corps on officers and enlisted men of the Army during the calendar year 1912*—Continued.

Operation.	Disease or injury.	Cases.	Result.				Anesthetic.					
			Successful.	Partially successful.	Failure.	Died.	Chloroform.	Ether.	Chloroform and ether.	Nitrous oxide.	Local.	None.
	TUMORS—continued.											
Excision 35 Excision of capsule 4 Incision and curetment 17 Incision and drainage 7	Sebaceous cyst	63	63				1				62	
Excision	Tumor, benign, nature not stated.	1	1								1	
Do 1 Dissection 1 Removal and curetment 1	Tumor, type undetermined	3	3					1			2	
	PLASTIC OPERATIONS.											
Excision and plastic operation.	Ulcer	1	1								1	
Do	Corns	3	3								3	
Thiersch's skin grafting	Lacerated wound with extensive denudation of structures.	1	1					1				
	MISCELLANEOUS.											
Coaptation and suturing	Incised wound	56	56					2			26	28
Cleansing and suturing	Lacerated wound	49	49				1				36	12
Incision and drainage 3 Incision and cauterization 7 Incision and curetment 1	Punctured wound (4 infected)	11	10	1				1			6	4
Incision and drainage 16 Multiple incision 2	Infected wounds, nature not stated	18	16	1	1		2	2			7	7
Incision and drainage 1 Ligation of arteries, cleansing and suturing 1	Gunshot wound	2	1			[1] 1	1	1				
Excision of scar tissue 1 Freeing integument from stump and suture 1	Irritable stump, finger	2	2					2				
Incision and drainage 3 Counter incision for drainage 1	Psoas abscess	4	4					4				
Total number of cases.		4,856	4,782	29	20	25	226	1,810	49	36	2,233	502

[1] Died of tetanus.

TABLE No. 67.—*Numerical view of the effect of disease and injury on United States troops, serving at home and abroad, in the year 1912, compared with corresponding data for the year 1911, by races.*

ABSOLUTE NUMBERS.

	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Noneffective from sickness.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Days treated.	Constantly noneffective.
White troops 1912	74,366	60,668	49,669	10,999	1,042	945	97	353	175	178	1,395	1,120	275	814,538	2,225.51
1911	69,746	65,830	54,236	11,594	969	860	109	328	183	145	1,297	1,043	254	855,289	2,343.26
Colored troops 1912	3,901	3,819	3,106	713	27	25	2	28	14	14	55	39	16	47,683	130.28
1911	3,002	2,243	1,739	504	42	37	5	20	11	9	62	48	14	28,357	77.69
Porto Rican troops 1912	588	672	610	62	4	4	....	2	....	2	6	4	2	6,042	16.51
1911	580	609	562	47	5	4	1	4	2	2	9	6	3	6,304	17.27
Philippine Scouts 1912	5,407	3,667	3,337	330	45	38	7	24	17	7	69	55	14	40,210	109.86
1911	5,266	3,922	3,510	412	26	23	3	24	17	7	50	40	10	38,172	104.58

PROPORTIONATE NUMBERS.

	Mean strength.	Admitted.			Discharged on certificate of disability.			Died.			Total losses.			Constantly noneffective.	Days treated.	
		Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.	Total.	Disease.	Injury.		Each soldier.	Each case.
White troops 1912	74,366	815.80	667.90	147.90	13.76	12.48	1.28	4.66	2.31	2.35	18.42	14.79	3.63	29.93	10.95	13.43
1911	69,746	943.85	777.43	166.23	13.84	12.28	1.56	4.68	2.61	2.07	18.52	14.89	3.63	33.60	12.26	12.99
Colored troops 1912	3,901	978.98	796.21	182.77	6.92	6.41	.51	7.18	3.59	3.59	14.10	10.00	4.10	33.40	12.22	12.49
1911	3,002	747.17	579.28	167.89	13.99	12.33	1.66	6.66	3.66	2.99	20.65	15.99	4.65	25.88	9.45	12.64
Porto Rican troops 1912	588	1,142.86	1,037.41	105.44	6.80	6.80	....	3.40	....	3.40	10.20	6.80	3.40	17.47	10.28	8.99
1911	580	1,050.00	968.97	81.03	8.62	6.90	1.72	6.90	3.45	3.45	15.52	10.35	5.17	29.78	10.87	10.35
Philippine Scouts 1912	5,407	678.20	617.16	61.04	8.19	6.92	1.27	4.37	3.09	1.27	12.56	10.01	2.54	20.32	7.44	10.96
1911	5,266	744.78	666.54	78.24	4.94	4.37	.57	4.56	3.23	1.33	9.50	7.60	1.90	19.86	7.25	9.73

TABLE No. 68.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the decade ending Dec. 31, 1911, are placed in comparison with the year 1912.*

	The Army, 1902–1911. (Enlisted American troops only beginning 1904.)						American troops, Army 1912. (Enlisted men only.)					
Mean strength	S. G. O., 658,315 (mean annual 65,831). A. G. O., 668,388 (mean annual 66,839).						S. G. O., 78,267. A. G. O., 79,613.					
Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Typhoid fever	2,639	4.01	9	0.01	226	0.34	21	0.27			2	0.03
Malarial fevers, total	64,879	98.55	19	.03	101	.15	3,131	40.00			4	.05
Intermittent	53,107	80.66	2	.003	4	.01	2,307	29.48				
Estivo-autumnal	10,523	15.98			85	.13	702	8.97			4	.05
Other malarial fevers	1,249	1.90	17	.03	12	.02	122	1.56				
Smallpox	232	.35			22	.03	6	.08				
Measles	6,925	10.52	3	.004	85	.12	508	6.49	6	0.08	13	.16
Eruptive fevers, other	1,254	1.90			3	.004	286	3.65				
Diphtheria	325	.49	1	.001	8	.01	79	1.01				
Influenza	17,168	26.08			5	.01	1,262	16.12				
Asiatic cholera	670	1.02			397	.59						
Cholera nostras	212	.32					3	.04				
Dysentery	13,193	20.04	317	.47	278	.42	337	4.31	7	.09	2	.03
Yellow fever	30	.05			6	.01						
Leprosy	3	.005	2	.003	1	.001						
Beriberi	1,275	1.94	13	.02	60	.09						
Erysipelas	482	.73	1	.001	11	.02	27	.34				
Dengue	17,887	27.17			1	.001	1,363	17.41				
Mumps	7,241	11.00					1,330	16.99	1	.01		
Cerebrospinal fever, including meningitis	160	.24	16	.02	95	.14	15	.19			8	.10
Purulent infection, and septicemia	103	.16	4	.01	50	.07	6	.08	1	.01	4	.05
Tuberculosis, all	2,969	4.51	1,860	2.78	393	.59	273	3.49	124	1.56	25	.31
Total, venereal	120,357	182.83	1,941	2.90	32	.05	10,699	136.70	100	1.26	8	.10
Syphilis and its results	20,192	30.67	1,283	1.92	29	.04	2,224	28.42	48	.60	6	.08
Chancroid and its results	22,332	33.92	14	.02			2,267	28.96	2	.03	1	.01
Gonorrhea and its results	77,833	118.23	644	.96	3	.004	6,208	79.32	50	.63	1	.01
Cancer and other malignant growths	139	.21	26	.04	52	.08	17	.22	2	.03	8	.10
Rheumatism, acute articular	5,340	8.11	18	.03	4	.01	597	7.63	1	.01	5	.06
Rheumatism, chronic articular	3,685	5.60	289	.43	1	.001	116	1.48	18	.23		
Alcoholism and its results	17,412	26.45	140	.21	107	.16	1,360	17.38	26	.33	12	.15
Diseases of the brain and spinal cord	1,906	2.90	1,145	1.71	62	.09	320	4.09	226	2.84	7	.09
Tetanus	9	.01			7	.01						

TABLE No. 68.—*Admissions to sick report, discharges, and deaths, with ratios per 1,000 of mean strength, in which all available data for the decade ending Dec. 31, 1911, are placed in comparison with the year 1912*—Continued.

	The Army, 1902–1911. (Enlisted American troops only beginning 1904.)						American troops, Army 1912. (Enlisted men only.)					
Mean strength	S. G. O., 658,315 (mean annual 65,831). A. G. O., 668,388 (mean annual 66,839).						S. G. O., 78,267. A. G. O., 79,613.					
Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Admissions.		Discharges.		Deaths.	
	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
Diseases of the heart	3,560	5.41	919	1.38	204	0.31	145	1.85	53	0.67	14	0.18
Varicocele	2,647	4.02	32	.05	....	....	181	2.31	3	.04	....	....
Adenitis nonvenereal	4,175	6.34	2	.003	....	....	418	5.34	....	....	....	....
Lymphangitis	312	.47	3	.004	....	....	33	.42	....	....	....	....
Coryza and other diseases of the nasal fossæ	12,426	18.87	57	.09	....	....	1,065	13.61	3	.04	....	....
Bronchitis, acute and chronic	29,438	44.72	49	.07	8	.01	2,731	34.89	8	.10	....	....
Pneumonia, all	1,900	2.89	3	.004	283	.42	212	2.71	2	.03	17	.21
Pleurisy	1,993	3.03	62	.09	23	.03	252	3.22	2	.03	....	....
Tonsillitis and other diseases of the pharynx	42,646	64.78	2	.003	3	.004	5,113	65.33	....	....	....	....
Gastritis	9,763	14.83	61	.09	9	.01	976	12.47	....	....	1	.01
Diarrhea and enteritis	56,427	85.72	89	.13	60	.09	2,380	30.41	3	.04	2	.03
Peritonitis (simple)	65	.10	4	.01	26	.04	3	.04	1	.01	2	.03
Hernia	2,972	4.52	428	.64	11	.02	299	3.82	22	.28	....	....
Appendicitis	2,990	4.54	54	.08	80	.12	516	6.59	....	....	8	.10
Diseases of the kidneys	1,184	1.80	144	.22	134	.21	99	1.26	20	.25	14	.18
Periostitis	573	.87	26	.04	....	....	53	.68	2	.03	....	....
Arthritis and synovitis	3,044	4.62	152	.23	....	....	247	3.16	12	.15	....	....
All other diseases	220,029	334.23	4,180	6.25	294	.44	16,296	208.21	327	4.11	33	.41
Total for diseases	682,639	1,036.95	12,071	18.06	3,142	4.70	52,775	674.29	970	12.18	189	2.37
Total for injuries	137,838	209.38	1,402	2.10	1,641	2.46	11,712	149.64	99	1.24	192	2.41
Grand total	820,477	1,246.33	13,478	20.16	4,783	7.16	64,487	823.94	1,069	13.43	381	4.79

TABLE No. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army, officers and total enlisted men, for the year 1912.*

International classification.		Officers, Army.								American troops, Army.							
	Mean strength	S. G. O., 4,216—A. G. O., 4,690.								S. G. O., 78,267—A. G. O., 79,613.							
	Causes of admission to sick report.	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	Typhoid fever	3	0.71			1	0.21	0.41	0.10	21	0.27			2	0.03	3.97	0.05
1a	Paratyphoid fever									4	.05					.48	.01
4	Malaria	106	25.14					2.57	.61	3,131	40.00			4	.05	66.73	.85
	Estivo-autumnal fever	20	4.74					.86	.20	702	8.97			4	.05	20.24	.26
	Malarial cachexia	3	.71					.11	.03	14	.18					1.33	.02
	Quartan malarial fever									24	.31					.67	.01
	Tertian malarial fever	79	18.74					1.47	.35	2,283	29.17					42.62	.54
	Undetermined malarial fever	4	.95					.13	.03	108	1.38					1.88	.02
5	Smallpox and varioloid									6	.08					.52	.01
5b	Vaccinia	2	.47					.005	.001	764	9.76					7.58	.10
6	Measles	3	.71					.10	.02	508	6.49	6	0.08	13	.16	29.92	.38
7	Scarlet fever									14	.18					1.09	.01
9	Diphtheria	6	1.42					.28	.07	79	1.01					4.41	.06
10	Influenza	160	37.95					2.61	.62	1,262	16.12					20.27	.26
13	Cholera nostras									3	.04					.02	.0003
14	Dysentery	20	4.74	2	0.43			1.18	.28	337	4.31	7	.09	2	.03	24.14	.31
	Bacillary	4	.95					.13	.03	35	.45	1	.01			1.74	.02
	Entamebic	10	2.37	2	.43			.56	.13	235	3.00	6	.08	2	.03	19.82	.25
	Unclassified	6	1.42					.48	.11	67	.86					2.57	.03
18	Erysipelas	4	.95					.14	.03	27	.34					1.24	.02
19b	Dengue	81	19.21					1.52	.36	1,363	17.41					23.85	.30
19d	German measles	6	1.42					.15	.03	230	2.94					5.12	.07
19e	Hemoglobinuric fever	1	.24					.003	.001							.11	.001
19g	Mumps	8	1.90					.29	.07	1,330	16.99	1	.01			60.38	.77
20	Purulent infection and septicemia									6	.08	1	.01	4	.05	1.25	.02
25	Mycoses									9	.11					.69	.01
28-34	Tuberculosis, all	6	1.42	2	43	1	.21	12.59	2.99	273	3.49	124	1.56	25	.31	109.70	40
28	Tuberculosis of lungs	6	1.42	2	.43	1	.21	11.21	2.66	241	3.08	116	1.46	21	.26	102.66	31
29	Miliary tuberculosis, acute									3	.04			3	.04	.27	.003
30-34	Tuberculosis of other organs							1.39	.33	29	.37	8	.10	1	.01	6.77	.09
36	Scoliosis (rickets)									2	.03	2	.03			.36	.00
37-38	Venereal diseases, all	22	5.22					2.33	.55	10,699	136.70	100	1.26	8	.10	609.39	7.78

TABLE No. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army, officers and total enlisted men, for the year 1912*—Continued.

International classification.	Mean strength.	Officers, army.								American troops, army.							
		S. G. O., 4,216—A. G. O., 4,690.								S. G. O., 78,267—A. G. O., 79,613.							
	Causes of admission to sick report.	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
37	Syphilis	8	1.90					1.17	0.28	2,224	28.42	48	0.60	6	0.08	154.15	1.97
38a	Soft chancre	2	.47					.17	.04	2,267	28.96	2	.03	1	.01	128.54	1.64
38b	Gonococcus infection	12	2.85					.99	.23	6,208	79.32	50	.63	1	.01	326.70	4.17
39–45	Cancer and other malignant tumors	4	.95			2	0.43	.13	.03	17	.22	2	.03	8	.10	3.84	.05
46	Benign tumors	8	1.90					.32	.08	124	1.58	1	.01			4.06	.05
47–48	Rheumatism, articular, all	27	6.40	1	0.21			1.70	.40	713	9.11	19	.24	5	.06	45.99	.59
47	Acute articular rheumatism	17	4.03					.78	.19	597	7.63	1	.01	5	.06	31.49	.40
48	Chronic articular rheumatism	10	2.37	1	.21			.92	.22	116	1.48	18	.23			14.50	.19
50	Diabetes	4	.95			1	.21	.56	.13	14	.18	6	.08	1	.01	1.72	.02
51	Exophthalmic goiter	2	.47					.65	.15	14	.18	7	.09			2.39	.03
56	Alcoholism and results	19	4.51			1	.21	.27	.06	1,360	17.38	26	.33	12	.15	23.22	.30
57–58	Chronic occupational poisoning									1	.01					.03	.0004
59	Other chronic poisoning, including drug habit									32	.41	7	.09	1	.01	2.54	.03
60	Encephalitis									2	.03			2	.03	.02	.0003
61	Simple meningitis									2	.03			2	.03	.13	.002
61a	Epidemic cerebrospinal meningitis									13	.17			6	.08	.97	.01
62	Locomotor ataxia	3	.71					1.15	.27	6	.08	4	.05			2.00	.03
63	Other diseases of spinal cord									12	.15	7	.09			2.60	.03
64	Cerebral hemorrhage, apoplexy	1	.24					.02	.01	5	.06	2	.03	3	.04	1.22	.02
66	Paralysis without specified cause	3	.71					.53	.13	25	.32	3	.04			3.10	.04
67–68	Mental alienation	7	1.66	2	.43			.72	.17	270	3.45	210	2.64	2	.03	60.45	.77
69	Epilepsy	3	.71					1.00	.24	91	1.16	32	.40			8.73	.11
73	Neuralgia and neuritis	46	10.91					1.70	.40	440	5.62	21	.26			21.99	.28
75a	Follicular conjunctivitis									9	.11					.20	.003
75b	Trachoma	2	.47					.12	.03	25	.32	3	.04			1.31	.02
77	Pericarditis									8	.10					.86	.01
78	Acute endocarditis									6	.08	1	.01			.65	.01
79	Organic heart disease	10	2.37	4	.85	2	.43	.30	.07	126	1.61	51	.64	14	.18	15.41	.20
80	Angina pectoris									18	.23	1	.01	3	.04	.97	.01

81	Diseases of the arteries, atheroma, aneurism, etc.	3	.71	1	.21			.14	.03	18	.23	1	.01	5	.06	2.11	.03
82	Embolism and thrombosis	1	.24			1	.21	.01	.002	1	.01			1	.01	.01	.0001
83b	Hemorrhoids	41	9.72					1.53	.36	481	6.15	1	.01			15.11	.19
83d	Varicose veins	6	1.42					.35	.08	59	.75					4.18	.05
83e	Varicocele	1	.24					.11	.03	181	2.31	3	.04			11.20	.14
84	Diseases of the lymphatic system	7	1.66					.56	.13	454	5.80					24.25	.31
86	Diseases of the nasal fossae	126	29.89					1.44	.34	1,065	13.61	3	.04			14.97	.19
87	Diseases of the larynx	19	4.51					.20	.05	241	3.08					3.88	.05
88	Diseases of the thyroid body	1	.24					.13	.03	12	.15	2	.03	1	.01	1.15	.01
89-90	Bronchitis	181	42.93					2.80	.66	2,731	34.89	8	.10			58.98	.75
91	Broncho-pneumonia	1	.24					.07	.02	34	.43			5	.06	3.92	.05
92	Pneumonia	8	1.90			2	.43	.94	.22	178	2.27	2	.03	12	.15	14.09	.18
93	Pleurisy	5	1.19					.22	.05	252	3.22	2	.03			18.21	.23
94	Pulmonary congestion and pulmonary apoplexy	1	.24					.003	.001	23	.29			2	.03	.28	.004
96	Asthma	11	2.61					.78	.19	67	.86	6	.08			4.98	.06
98a	Hemoptysis									8	.10					.19	.002
98b	Hay fever	3	.71					.07	.02	4	.05					.17	.002
99a	Diseases of the teeth and gums	46	10.91					1.16	.27	565	7.22					10.43	.13
99b	Other diseases of the mouth and annexa	4	.95					.07	.02	61	.78	1	.01			2.24	.03
100	Diseases of the pharynx	161	38.19					2.10	.50	5,113	65.33					74.70	.95
102	Ulcer of stomach	1	.24					.02	.004	9	.11	3	.04	1	.01	1.78	.02
103	Other diseases of stomach (cancer excepted)	88	20.87					1.70	.40	1,040	13.29	1	.01	1	.01	19.57	.25
105	Diarrhea and enteritis	151	35.82					3.85	.91	2,380	30.41	3	.04	2	.03	35.00	.45
107	Intestinal parasites	6	1.42					.05	.01	179	2.29					3.44	.04
108	Appendicitis	54	12.81			2	.43	4.90	1.16	516	6.59			8	.10	40.64	.52
109	Hernia	23	5.46	1	.21			2.33	.55	299	3.82	22	.28			32.45	.41
110a	Diseases of the anus and fecal fistula	5	1.19					.39	.09	69	.88	2	.03			5.29	.07
110b	Other diseases of the intestines	46	10.91			1	.21	1.61	.38	2,053	26.23	2	.03	1	.01	27.60	.35
113	Cirrhosis of liver							.03	.01	5	.06			2	.03	.48	.01
114	Biliary calculi	2	.47					.04	.01	19	.24			1	.01	1.43	.02
115	Other diseases of liver and gall bladder	18	4.27					1.07	.25	274	3.50			4	.05	15.68	.20
117	Simple peritonitis									3	.04	1	.01	2	.03	.28	.004
119	Acute nephritis	1	.24					.05	.01	28	.36			6	.08	1.60	.02
120	Bright's disease	11	2.61	2	.43	3	.64	3.10	.74	47	.60	16	.20	8	.10	8.01	.10
122	Other diseases of the kidney and annexa	3	.71					.19	.04	24	.31	4	.05			1.79	.02
124	Diseases of the bladder	9	2.13					.46	.11	210	2.68	30	.38			12.61	.16
125	Diseases of the urethra, urinary abscess, etc.	1	.24					.02	.004	105	1.34					1.93	.03
126	Diseases of the prostate	1	.24					.31	.07	5	.06					.36	.005
127	Diseases of the male genital organs (non venereal)	5	1.19					.25	.06	451	5.76	2	.03			15.67	.20
143	Furuncle and carbuncle	64	15.18					1.29	.31	1,498	19.14					28.79	.37
144	Acute abscess and cellulitis	32	7.59					.76	.18	1,054	13.47					27.89	.36
146	Diseases of the bones	18	4.27					.95	.22	157	2.01	9	.11			13.00	.17
147	Diseases of the joints	18	4.27					1.23	.29	259	3.31	15	.19			18.74	.24

Table No. 69.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the Army, officers and total enlisted men, for the year 1912*—Continued.

Inter-national classification.		Officers, army.								American troops, army.							
	Mean strength	S. G. O., 4,216—A. G. O., 4,690.								S. G. O., 78,267—A. G. O., 79,613.							
	Causes of admission to sick report.	Admissions.		Retirement for disability.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
150	Congenital malformations	6	1.42					0.23	0.05	287	3.67	1	0.01			9.25	0.12
189Aa	Febricula, simple continued, and other fevers of undetermined causation	5	1.19					.12	.03	319	4.08					5.51	.07
189Ba	Under observation, undiagnosed and unknown	6	1.42					.39	.09	150	1.92	1	.01	2	0.03	9.49	.12
189Bb	Malingering									34	.43					1.72	.02
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[1]																
155-163	Suicides, all					2	0.43			20	.26			54	.68		
164	Poisoning by food	13	3.08							293	3.74			2	.03		
165a	Venemous bites and stings									85	1.09						
165b	Other poisoning (deleterious gases excepted)	1	.24							29	.37			7	.09		
166	Conflagration									2	.03						
167	Burns (conflagrations excepted)	2	.47							196	2.50						
168	Absorption of deleterious gases									3	.04			2	.03		
168a	Suffocation, strangulation													1	.01		
169	Drowning, accidental					1	.21							43	.54		
170	Traumatism by firearms (other than specified)	3	.71							158	2.02	15	.19	11	.14		
170a	Shot by sentry or guard									8	.10			4	.05		
171	Traumatism by cutting or piercing instruments	9	2.13							941	12.02	8	.10	2	.03		
172	Traumatism by fall	168	39.85	1	0.21					3,775	48.23	24	.30	14	.18		
173	Traumatism in mines and quarries	1	.24														
174	Traumatism by machines	3	.71							93	1.19	3	.04	1	.01		
175	Traumatism by other crushing	2	.47			2	.43			156	1.99	8	.10	26	.33		
176	Injuries by animals	87	20.63			1	.21			1,148	14.67	6	.08				
178	Effects of excessive cold	1	.24							45	.57	2	.03				

179	Effects of heat	11	2.61	...	...	...	...	...	...	173	2.21	...	...	1	.01	...	...
180	Effects of lightning	...	...	...	...	...	...	...	...	5	.06	...	...	2	.08	...	...
181	Effects of electricity	1	.24	...	...	...	...	...	...	1	.01	...	...	...	...	...	...
182-4	Homicides, all	...	...	...	...	1	.21	...	...	8	.10	...	...	20	.25	...	...
185	Fractures, causes not specified	...	...	...	...	...	...	...	...	8	.10	...	...	1	.01	...	...
186	Other external violence	127	30.12	...	...	...	...	...	...	4,563	58.30	32	.40	1	.01	...	...
	Killed or wounded in action	1	.24	...	...	...	...	...	...	2	.03	1	.01	...	...	...	...
	By bullet	1	.24	...	...	...	...	...	...	1	.01	1	.01	...	...	...	...
	By bolo, kris, etc	...	...	...	...	...	...	...	...	1	.01	...	...	...	...	...	...
155-186	Total external causes	430	101.99	1	.21	7	1.49	18.99	4.50	11,712	149.64	99	1.24	192	2.41	365.23	4.67
	DISEASES AND INJURIES GROUPED.																
	General diseases:																
1-19	Epidemic diseases	428	101.52	2	.43	1	.21	9.46	2.24	9,551	122.03	14	.18	21	.26	257.14	3.29
20-59	Other general diseases	93	22.06	3	.64	5	1.07	18.93	4.49	13,295	169.86	301	3.78	68	.85	808.47	10.33
	Diseases of the nervous system and organs of special sense:																
60-74	Of the nervous system	112	26.57	4	.85	...	...	10.40	2.47	1,137	14.53	299	3.76	15	.19	115.91	1.48
75	Of the eye and its adnexa	62	14.70	1	.21	...	...	1.57	.37	713	9.11	15	.19	...	...	24.91	.32
76	Of the ear and its adnexa	23	5.46	3	.64	...	...	1.63	.39	448	5.72	31	.39	1	.01	20.65	.26
77-85	Diseases of the circulatory system	73	17.31	5	1.07	3	.64	3.45	.82	1,487	19.00	67	.84	23	.29	82.31	1.05
86-98	Diseases of the respiratory system	357	84.68	...	...	2	.43	6.72	1.59	4,648	59.38	24	.30	21	.26	121.83	15.57
99-118	Diseases of the digestive system	607	143.98	1	.21	3	.64	19.34	4.59	12,595	160.92	36	.45	23	.29	271.51	3.47
119-127	Diseases of the genito-urinary system	42	9.96	2	.43	3	.64	4.69	1.11	910	11.63	53	.67	14	.18	43.28	.55
142-145	Diseases of the skin and cellular tissue	149	35.34	...	...	...	...	4.07	.96	5,055	64.59	11	.14	1	.01	126.08	1.61
146-149	Diseases of the organs of locomotion	117	27.75	...	...	...	...	4.94	1.17	2,068	26.42	117	1.47	...	...	91.55	1.17
150	Malformations, etc	6	1.42	...	...	...	...	.23	.05	287	3.67	1	.01	...	...	9.25	.12
189	Ill-defined diseases	17	4.03	...	...	...	...	.66	.16	581	7.42	1	.01	2	.03	17.67	.23
	Total for disease	2,086	494.78	21	4.48	17	3.62	86.09	20.42	52,775	674.29	970	12.18	189	2.37	1,990.57	25.43
155-186	External causes	430	101.99	1	.21	7	1.49	18.99	4.50	11,712	149.64	99	1.24	192	2.41	365.23	4.67
	Total for disease and external causes	2,516	596.78	22	4.69	24	5.12	105.08	24.92	64,487	823.94	1,069	13.43	381	4.79	2,355.80	30.10

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[1] Noneffectiveness for individual external causes not tabulated.

TABLE NO 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for the enlisted men of the Army for the year 1912.*

International classification.		Total.								White.								Colored.							
	Mean strength..............	S. G., 78,267—A. G., 79,613.								S. G., 74,366—A. G., 75,712.								S. G., 3,901—A. G., 3,901.							
	Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	Typhoid fever............	21	0.27	....	....	2	0.03	3.97	0.05	21	0.28	....	....	2	0.03	3.97	0.05	....	....	....	....	....	....	....	....
1a	Paratyphoid fever.........	4	.05	....	....	....	....	.48	.01	4	.05	....	....	....	....	.48	.01	....	....	....	....	....	....	....	....
4	Malaria....................	3,131	40.00	....	....	4	.05	66.73	.85	3,057	41.11	....	....	4	.05	65.02	.87	74	18.97	....	....	....	....	1.71	0.44
	Estivo-autumnal fever	702	8.97	....	....	4	.05	20.24	.26	667	8.97	....	....	4	.05	19.30	.26	35	8.97	....	....	....	....	.93	.24
	Malarial cachexia......	14	.18	....	....	....	....	1.33	.02	14	.19	....	....	....	....	1.33	.02	....	....	....	....	....	....	....	....
	Quartan malarial fever.	24	.31	....	....	....	....	.67	.01	23	.31	....	....	....	....	.64	.01	1	.26	....	....	....	....	.02	.01
	Tertian malarial fever..	2,283	29.17	....	....	....	....	42.62	.54	2,266	30.47	....	....	....	....	42.24	.57	17	4.36	....	....	....	....	.37	.10
	Undetermined malarial fever..............	108	1.38	....	....	....	....	1.88	.02	87	1.17	....	....	....	....	1.50	.02	21	5.38	....	....	....	....	.38	.10
5	Smallpox and varioloid....	6	.08	....	....	....	....	.52	.01	6	.08	....	....	....	....	.52	.01	....	....	....	....	....	....	....	....
5b	Vaccinia...................	764	9.76	....	....	....	....	7.58	.10	758	10.19	....	....	....	....	7.48	.10	6	1.54	....	....	....	....	.10	.03
6	Measles....................	508	6.49	6	0.08	13	.16	29.92	.38	490	6.59	6	0.08	13	.17	28.79	.39	18	4.61	....	....	....	....	1.13	.29
7	Scarlet fever..............	14	.18	....	....	....	....	1.09	.01	14	.19	....	....	....	....	1.09	.01	....	....	....	....	....	....	....	....
9	Diphtheria................	79	1.01	....	....	....	....	4.41	.06	79	1.06	....	....	....	....	4.41	.06	....	....	....	....	....	....	....	....
10	Influenza..................	1,262	16.12	....	....	....	....	20.27	.26	1,229	16.53	....	....	....	....	19.69	.26	33	8.46	....	....	....	....	.58	.15
13	Cholera nostras...........	3	.04	....	....	....	....	.02	.0003	3	.04	....	....	....	....	.02	.0003	....	....	....	....	....	....	....	....
14	Dysentery.................	337	4.31	7	.09	2	.03	24.14	.31	322	4.33	6	.08	2	.03	22.73	.31	15	3.85	1	0.26	....	....	1.41	.36
	Bacillary..............	35	.45	1	.01	....	....	1.74	.02	32	.43	1	.01	....	....	1.56	.02	3	.77	....	....	....	....	.18	.05
	Entamebic	235	3.00	6	.08	2	.03	19.82	.25	226	3.04	5	.07	2	.03	18.77	.25	9	2.31	1	.26	....	....	1.05	.27
	Unclassified...........	67	.86	....	....	....	....	2.57	.03	64	.86	....	....	....	....	2.39	.03	3	.77	....	....	....	....	.18	.05
18	Erysipelas................	27	.34	....	....	....	....	1.24	.02	26	.35	....	....	....	....	1.15	.02	1	.26	....	....	....	....	.09	.02
19b	Dengue....................	1,363	17.41	....	....	....	....	23.85	.30	1,136	15.28	....	....	....	....	18.90	.25	227	58.19	....	....	....	....	4.95	1.27
19d	German measles..........	230	2.94	....	....	....	....	5.12	.07	230	3.09	....	....	....	....	5.08	.07	....	....	....	....	....	....	.03	.01
19e	Hemoglobinuric fever.....	....	....	....	....	....	....	.11	.001	....	....	....	....	....	....	.11	.002	....	....	....	....	....	....	....	....
19g	Mumps....................	1,330	16.99	1	.01	....	....	60.38	.77	1,302	17.51	1	.01	....	....	58.87	.79	28	7.18	....	....	....	....	1.51	.39
20	Purulent infection and septicemia	6	.08	1	.01	4	.05	1.25	.02	6	.08	1	.01	4	.05	1.25	.02	....	....	....	....	....	....	....	....
25	Mycosis....................	9	.11	....	....	....	....	.69	.01	9	.12	....	....	....	....	.69	.01	....	....	....	....	....	....	....	....
28-34	Tuberculosis, all...........	273	3.49	124	1.56	25	.31	109.70	1.40	252	3.39	119	1.57	19	.25	101.86	1.37	21	5.38	5	1.28	6	1.54	7.84	2.01
28	Tuberculosis of lungs......	241	3.08	116	1.46	21	.26	102.66	1.31	225	3.02	111	1.47	17	.22	95.48	1.28	16	4.10	5	1.28	4	1.03	7.17	1.84
29	Miliary tuberculosis, acute.	3	.04	....	....	3	.04	.27	.003	1	.01	....	....	1	.01	.02	.0003	2	.51	....	....	2	.51	.25	.06

30-34	Tuberculosis of other organs	29	.37	8	.10	1	.01	6.77	.09	26	.35	8	.11	1	.01	6.35	.09	3	.77	....	....	....	....	.42	.11
36	Scoliosis (rickets)	2	.03	2	.03	....	....	.36	.005	2	.03	2	.03	....	....	.36	.005	....	....	....	....	....	....	....	....
37-38	Venereal diseases, all	10,699	136.70	100	1.26	8	.10	609.39	7.78	9,726	130.79	97	1.28	7	.09	566.05	7.61	973	249.42	3	.77	1	.26	43.34	11.11
37	Syphilis	2,224	28.42	48	.60	6	.08	154.15	1.97	2,142	28.80	46	.61	5	.07	146.07	1.96	82	21.02	2	.51	1	.26	8.08	2.07
38a	Soft chancre	2,267	28.96	2	.03	1	.01	128.54	1.64	2,025	27.23	2	.03	1	.01	118.62	1.60	242	62.03	....	....	....	....	9.91	2.54
38b	Gonococcus infection	6,208	79.32	50	.63	1	.01	326.70	4.17	5,559	74.75	49	.65	1	.01	301.36	4.05	649	166.37	1	.26	....	....	25.34	6.50
39-45	Cancer and other malignant tumors	17	.22	2	.03	8	.10	3.84	.05	17	.23	2	.03	8	.11	3.84	.05	....	....	....	....	....	....	....	....
46	Benign tumors	124	1.58	1	.01	....	....	4.06	.05	121	1.63	1	.01	....	....	4.01	.05	3	.77	....	....	....	....	.06	.01
47-48	Rheumatism, articular, all	713	9.11	19	.24	5	.06	45.99	.59	668	8.98	18	.24	4	.05	44.30	.60	45	11.54	1	.26	1	.26	1.69	.43
47	Acute articular rheumatism	597	7.63	1	.01	5	.06	31.49	.40	564	7.58	1	.01	4	.05	30.14	.41	33	8.46	....	....	1	.26	1.35	.35
48	Chronic articular rheumatism	116	1.48	18	.23	....	....	14.50	.19	104	1.40	17	.22	....	....	14.16	.19	12	3.08	1	.26	....	....	.34	.09
50	Diabetes	14	.18	6	.08	1	.01	1.72	.02	14	.19	6	.08	1	.01	1.72	.02	....	....	....	....	....	....	....	....
51	Exophthalmic goiter	14	.18	7	.09	....	....	2.39	.03	14	.19	7	.09	....	....	2.39	.03	....	....	....	....	....	....	....	....
56	Alcoholism and results	1,360	17.38	26	.33	12	.15	23.22	.30	1,324	17.80	25	.33	12	.16	21.96	.30	36	9.23	1	.26	....	....	1.26	.32
57-58	Chronic occupational poisoning	1	.01	....	....	....	....	.03	.0004	1	.01	....	....	....	....	.03	.0004	....	....	....	....	....	....	....	....
59	Other chronic poisoning, including drug habit	32	.41	7	.09	1	.01	2.54	.03	30	.40	6	.08	1	.01	2.10	.03	2	.51	1	.26	....	....	.44	.11
60	Encephalitis	2	.03	....	....	2	.03	.02	.0003	2	.03	....	....	2	.03	.02	.0003	....	....	....	....	....	....	....	....
61	Simple meningitis	2	.03	....	....	2	.03	.13	.002	2	.03	....	....	2	.03	.13	.002	....	....	....	....	....	....	....	....
61a	Epidemic cerebrospinal meningitis	13	.17	....	....	6	.08	.97	.01	13	.17	....	....	6	.08	.97	.01	....	....	....	....	....	....	....	....
62	Locomotor ataxia	6	.08	4	.05	....	....	2.00	.03	6	.08	4	.05	....	....	2.00	.03	....	....	....	....	....	....	....	....
63	Other diseases of spinal cord	12	.15	7	.09	....	....	2.60	.03	12	.16	7	.09	....	....	2.60	.03	....	....	....	....	....	....	....	....
64	Cerebral hemorrhage, apoplexy	5	.06	2	.03	3	.04	1.22	.02	5	.07	2	.03	3	.04	1.22	.02	....	....	....	....	....	....	....	....
66	Paralysis without specified cause	25	.32	3	.04	....	....	3.10	.04	24	.32	3	.04	....	....	3.09	.04	1	.26	....	....	....	....	.01	.003
67-68	Mental alienation	270	3.45	210	2.64	2	.03	60.45	.77	258	3.47	203	2.68	2	.03	58.07	.78	12	3.08	7	1.79	....	....	2.38	.61
69	Epilepsy	91	1.16	32	.40	....	....	8.73	.11	87	1.17	31	.41	....	....	8.34	.11	4	1.03	1	.26	....	....	.39	.10
73	Neuralgia and neuritis	440	5.62	21	.26	....	....	21.99	.28	400	5.38	20	.26	....	....	19.92	.27	40	10.25	1	.26	....	....	2.07	.53
75a	Follicular conjunctivitis	9	.11	....	....	....	....	.20	.003	9	.12	....	....	....	....	.20	.003	....	....	....	....	....	....	....	....
75b	Trachoma	25	.32	3	.04	....	....	1.31	.02	25	.34	3	.04	....	....	1.31	.02	....	....	....	....	....	....	....	....
77	Pericarditis	8	.10	....	....	....	....	.86	.01	8	.11	....	....	....	....	.86	.01	....	....	....	....	....	....	....	....
78	Acute endocarditis	6	.08	1	.01	....	....	.65	.01	6	.08	1	.01	....	....	.65	.01	....	....	....	....	....	....	....	....
79	Organic heart disease	126	1.61	51	.64	14	.18	15.41	.20	123	1.65	50	.66	12	.16	14.70	.20	3	.77	1	.26	2	.51	.71	.18
80	Angina pectoris	18	.23	1	.01	3	.04	.97	.01	17	.23	1	.01	3	.04	.96	.01	1	.26	....	....	....	....	.005	.001
81	Diseases of the arteries, atheroma, aneurism, etc	18	.23	1	.01	5	.06	2.11	.03	16	.22	1	.01	3	.04	2.08	.03	2	.51	....	....	2	.51	.04	.01
82	Embolism and thrombosis	1	.01	....	....	1	.01	.01	.0001	1	.01	....	....	1	.01	.01	.0001	....	....	....	....	....	....	....	....
83b	Hemorrhoids	481	6.15	1	.01	....	....	15.11	.19	435	5.85	1	.01	....	....	13.94	.19	46	11.79	....	....	....	....	1.17	.30
83d	Varicose veins	59	.75	....	....	....	....	4.18	.05	58	.78	....	....	....	....	4.12	.06	1	.26	....	....	....	....	.05	.01
83e	Varicocele	181	2.31	3	.04	....	....	11.20	.14	179	2.41	3	.04	....	....	11.13	.15	2	.51	....	....	....	....	.07	.02
84	Diseases of the lymphatic system	454	5.80	....	....	....	....	24.25	.31	439	5.90	....	....	....	....	23.81	.32	15	3.85	....	....	....	....	.45	.11
86	Diseases of the nasal fossæ	1,065	13.61	3	.04	....	....	14.97	.19	1,030	13.85	3	.04	....	....	14.66	.20	35	8.97	....	....	....	....	.31	.08
87	Diseases of the larynx	241	3.08	....	....	....	....	3.88	.05	232	3.12	....	....	....	....	3.78	.05	9	2.31	....	....	....	....	.10	.02

TABLE NO 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for enlisted men of the Army for the year 1912*—Continued.

International classification.		Total.								White.								Colored.							
	Mean strength	S. G., 78,267—A. G., 79,613.								S. G., 74,366—A. G., 75,712.								S. G., 3,901—A. G., 3,901.							
	Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
88	Diseases of the thyroid body	12	0.15	2	0.03	1	0.01	1.15	0.01	12	0.16	2	0.03	1	0.01	1.15	0.02								
89-90	Bronchitis	2,731	34.89	8	.10			58.98	.75	2,573	34.60	8	.11			56.02	.75	158	40.50					2.96	0.76
91	Broncho-pneumonia	34	.43			5	.06	3.92	.05	33	.44			5	.07	3.73	.05	1	.26					.19	.05
92	Pneumonia	178	2.27	2	.03	12	.15	14.09	.18	166	2.23	2	.03	11	.15	13.40	.18	12	3.08			1	0.26	.68	.18
93	Pleurisy	252	3.22	2	.03			18.21	.23	233	3.13	2	.03			17.02	.23	19	4.87					1.20	.31
94	Pulmonary congestion and pulmonary apoplexy	23	.29			2	.03	.28	.004	23	.31			2	.03	.28	.004								
96	Asthma	67	.86	6	.08			4.98	.06	63	.85	6	.08			4.92	.07	4	1.03					.06	.02
98a	Hemoptysis	8	.10					.19	.002	8	.11					.19	.003								
98b	Hay fever	4	.05					.17	.002	4	.05					.17	.002								
99a	Diseases of the teeth and gums	565	7.22					10.43	.13	543	7.30					9.97	.13	22	5.64					.46	.12
99b	Other diseases of the mouth and annexa	61	.78	1	.01			2.24	.03	59	.79	1	.01			2.22	.03	2	.51					.02	.01
100	Diseases of the pharynx	5,113	65.33					74.70	.95	4,958	66.67					72.46	.97	155	39.73					2.25	.58
102	Ulcer of stomach	9	.11	3	.04	1	.01	1.78	.02	8	.11	3	.04	1	.01	1.75	.02	1	.26					.04	.01
103	Other diseases of stomach (cancer excepted)	1,040	13.29	1	.01	1	.01	19.57	.25	998	13.42	1	.01	1	.01	19.11	.26	42	10.77					.45	.12
105	Diarrhea and enteritis	2,380	30.41	3	.04	2	.03	35.00	.45	2,208	29.69	3	.04	2	.03	32.79	.44	172	44.09					2.21	.57
107	Intestinal parasites	179	2.29					3.44	.04	175	2.35					3.32	.04	4	1.03					.12	.03
108	Appendicitis	516	6.59			8	.10	40.64	.52	496	6.67			8	.11	39.41	.53	20	5.13					1.23	.32
109	Hernia	299	3.82	22	.28			32.45	.41	280	3.76	22	.29			30.12	.41	19	4.87					2.33	.60
110a	Diseases of the anus and fecal fistula	69	.88	2	.03			5.29	.07	67	.90	2	.03			5.22	.07	2	.51					.07	.02
110b	Other diseases of the intestines	2,053	26.23	2	.03	1	.01	27.60	.35	1,834	24.66	2	.03	1	.01	25.06	.34	219	56.14					2.54	.65
113	Cirrhosis of liver	5	.06			2	.03	.48	.01	5	.07			2	.03	.48	.01								
114	Biliary calculi	19	.24			1	.01	1.43	.02	19	.26			1	.01	1.43	.02								
115	Other diseases of liver and gall bladder	274	3.50			4	.06	15.68	.20	253	3.40			3	.04	14.39	.19	21	5.38			1	.26	1.29	.33

117	Simple peritonitis	3	.04	1	.01	2	.03	.28	.004	3	.04	1	.01	2	.03	.28	.004								
119	Acute nephritis	28	.36			6	.08	1.60	.02	27	.36			6	.08	1.55	.02	1	.26					.05	.01
120	Bright's disease	47	.60	16	.20	8	.10	8.01	.10	43	.58	15	.20	8	.11	7.35	.10	4	1.03	1	.26			.66	.17
122	Other diseases of the kidney and annexa	24	.31	4	.05			1.79	.02	24	.32	4	.05			1.79	.02								
124	Diseases of the bladder	210	2.68	30	.38			12.61	.16	199	2.68	29	.38			12.21	.16	11	2.82	1	.26			.40	.10
125	Diseases of the urethra, urinary abscess, etc	105	1.34					1.93	.03	99	1.33					1.85	.02	6	1.54					.08	.02
126	Diseases of the prostate	5	.06					.36	.005	5	.07					.36	.005								
127	Diseases of the male genital organs (nonvenereal)	451	5.76	2	.03			15.67	.20	433	5.82	2	.03			15.15	.20	18	4.61					.53	.14
143	Furuncle and carbuncle	1,498	19.14					28.79	.37	1,427	19.19					27.61	.37	71	18.20					1.18	.30
144	Acute abscess and cellulitis	1,054	13.47					27.89	.36	997	13.41					26.54	.36	57	14.61					1.35	.35
146	Diseases of the bones	157	2.01	9	.11			13.00	.17	142	1.91	9	.12			12.04	.16	15	3.85					.96	.25
147	Diseases of the joints	259	3.31	15	.19			18.74	.24	242	3.25	15	.20			17.42	.23	17	4.36					1.32	.34
150	Congenital malformations	287	3.67	1	.01			9.25	.12	277	3.72	1	.01			8.94	.12	10	2.56					.30	.08
189Aa	Febricula, simple continued, and other fevers of undetermined causation	319	4.08					5.51	.07	311	4.18					5.43	.07	8	2.05					.07	.02
189Ba	Under observation, undiagnosed, and unknown	150	1.92	1	.01	2	.03	9.49	.12	145	1.95	1	.01	2	.03	8.98	.12	5	1.28					.51	.13
189Bb	Malingering	34	.43					1.72	.02	32	.43					1.59	.02	2	.51					.13	.03
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[1]																								
155–163	Suicides, all	20	.26			54	.68			19	.26			51	.67			1	.26			3	.77		
164	Poisoning by food	293	3.74			2	.03			293	3.94			2	.03										
165a	Venomous bites and stings	85	1.09							79	1.06							6	1.54						
165b	Other poisoning (deleterious gases excepted)	29	.37			7	.09			27	.36			7	.09			2	.51						
166	Conflagration	2	.03							2	.03														
167	Burns (conflagrations excepted)	196	2.50							188	2.53							8	2.05						
168	Absorption of deleterious gases	3	.04			2	.03			3	.04			2	.03										
168a	Suffocation, strangulation					1	.01							1	.01										
169	Drowning, accidental					43	.54							41	.54							2	.51		
170	Traumatism by firearms (other than specified)	158	2.02	15	.19	11	.14			155	2.08	15	.20	10	.13			3	.77			1	.26		
170a	Shot by sentry or guard	8	.10			4	.05			7	.09			2	.03			1	.26			2	.51		
171	Traumatism by cutting or piercing instruments	941	12.02	8	.10	2	.03			858	11.54	8	.11	2	.03			83	21.28						
172	Traumatism by fall	3,775	48.23	24	.30	14	.18			3,530	47.47	24	.32	14	.18			245	62.80						
174	Traumatism by machines	93	1.19	3	.04	1	.01			91	1.22	3	.04	1	.01			2	.51						
175	Traumatism by other crushing	156	1.99	8	.10	26	.33			149	2.00	7	.09	25	.33			7	1.79	1	.26	1	1.26		
176	Injuries by animals	1,148	14.67	6	.08					1,069	14.37	5	.07					79	20.25	1	.26				
178	Effects of excessive cold	45	.57	2	.03					37	.50	2	.03					8	2.05						
179	Effects of heat	173	2.21			1	.01			170	2.29			1	.01			3	.77						
180	Effects of lightning	5	.06			2	.03			5	.07			2	.03										

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[1] Noneffectiveness for individual external causes not tabulated.

TABLE No 70.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for enlisted men of the Army for the year 1912*—Continued.

International classification.		Total.								White.								Colored.							
	Mean strength............	S. G., 78, 267—A. G., 79,613.								S. G., 74,366—A. G., 75,712.								S. G., 3,901—A. G., 3,901.							
	Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES—con.																								
181	Effects of electricity.......	1	0.01	....	....	....	....	....	....	1	0.01	....	....	....	....	....	....	....	....	....	....	....	....	....	....
182-4	Homicides, all............	8	.10	....	....	20	0.25	....	....	6	.08	....	....	15	0.20	....	....	2	0.51	....	....	5	1.28	....	....
185	Fractures, causes not specified.	8	.10	....	....	1	.01	....	....	8	.11	....	....	1	.01	....	....	....	....	....	....	....	....	....	....
186	Other external violence....	4,563	58.30	32	0.40	1	.01	....	....	4,300	57.82	32	0.42	1	.01	....	....	263	67.42	....	....	....	....	....	....
	Killed or wounded in action..................	2	.03	1	.01	....	....	....	....	2	.03	1	.01	....	....	....	....	....	....	....	....	....	....	....	....
	By bullet............	1	.01	1	.01	....	....	....	....	1	.01	1	.01	....	....	....	....	....	....	....	....	....	....	....	....
	By bolo, kris, etc......	1	.01	....	....	....	....	....	....	1	.01	....	....	....	....	....	....	....	....	....	....	....	....	....	....
155-186	Total external causes.	11,712	149.64	99	1.24	192	2.41	365.23	4.67	10,999	147.90	97	1.28	178	2.35	344.36	4.63	713	182.77	2	0.51	14	3.59	20.87	5.35
	DISEASES AND INJURIES GROUPED.																								
	General diseases...........	22,846	291.90	315	3.96	89	1.12	1,065.61	13.61	21,350	287.10	303	4.00	81	1.07	999.12	13.44	1,496	383.49	12	3.08	8	2.05	66.49	17.04
1-19	Epidemic diseases.....	9,551	122.03	14	.18	21	.26	257.14	3.29	9,135	122.84	13	.17	21	.28	245.27	3.30	416	106.64	1	.26	....	....	11.87	3.04
20-59	Other general diseases..	13,295	169.86	301	3.78	68	.85	808.47	10.33	12,215	164.26	290	3.83	60	.79	753.85	10.14	1,080	276.85	11	2.82	8	2.05	54.62	14.00
	Diseases of the nervous system and organs of special sense............	2,298	29.36	345	4.33	16	.20	161.47	2.06	2,174	29.23	336	4.44	16	.21	154.61	2.08	124	31.79	9	2.31	....	....	6.86	1.76
60-74	Of the nervous system.	1,137	14.53	299	3.76	15	.19	115.91	1.48	1,076	14.47	290	3.83	15	.20	110.90	1.49	61	15.64	9	2.31	....	....	5.01	1.29
75	Of the eye and its annexa.................	713	9.11	15	.19	....	....	24.91	.32	665	8.94	15	.20	....	....	23.44	.32	48	12.30	....	....	....	....	1.47	.38
76	Of the ear and its annexa.................	448	5.72	31	.39	1	.01	20.65	.26	433	5.82	31	.41	1	.01	20.27	.27	15	3.85	....	....	....	....	.38	.10

77-85	Diseases o· the circulatory system	1,487	19.00	67	.84	23	.29	82.31	1.05	1,408	18.93	66	.87	19	.25	79.59	1.07	79	20.25	1	.26	4	1.03	2.72	.70
86-98	Diseases of the respiratory system	4,648	59.38	24	.30	21	.26	121.83	15.57	4,410	59.30	24	.32	20	.26	116.33	1.56	238	61.01	....	....	1	.26	5.50	1.41
99-118	Diseases of the digestive system	12,595	160.92	36	.45	23	.29	271.51	3.47	11,916	160.23	36	.48	22	.29	258.50	3.48	679	174.06	....	....	1	.26	13.01	3.34
119-127	Diseases of the genito-urinary system	910	11.63	53	.67	14	.18	43.28	.55	868	11.67	51	.67	14	.18	41.52	.56	42	10.77	2	.51	....	....	1.76	.45
142-145	Diseases of the skin and cellular tissue	5,055	64.59	11	.14	1	.01	126.08	1.61	4,801	64.56	11	.15	1	.01	120.37	1.62	254	65.11	....	....	....	....	5.71	1.46
46a-149	Diseases of the organs of locomotion	2,068	26.42	117	1.47	....	....	91.55	1.17	1,901	25.56	116	1.53	....	....	85.23	1.15	167	42.81	1	.26	....	....	6.31	1.62
150	Malformations, etc	287	3.67	1	.01	....	....	9.25	.12	277	3.72	1	.01	....	....	8.94	.12	10	2.56	....	....	....	....	.30	.08
189	Ill-defined diseases	581	7.42	1	.01	2	.03	17.67	.23	564	7.58	1	.01	2	.03	16.94	.23	17	4.36	....	....	....	....	.73	.19
	Total for disease	52,775	674.29	970	12.18	189	2.37	1,990.57	25.43	49,669	667.90	945	12.48	175	2.31	1,881.16	25.30	3,106	796.21	25	6.41	14	3.59	109.41	28.05
155-186	External causes	11,712	149.64	99	1.24	192	2.41	365.23	4.67	10,999	147.90	97	1.28	178	2.35	344.36	4.63	713	182.77	2	.51	14	3.59	20.87	5.35
	Total for disease and external causes	64,487	823.94	1,069	13.43	381	4.79	2,355.80	30.10	60,668	815.80	1,042	13.76	353	4.66	2,225.51	29.93	3,819	978.98	27	6.92	28	7.18	130.28	33.40

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with States (continental) excluding*

Inter-national classification.	Mean strength	United States, continental, excluding Alaska, total.									
		S. G. O., 58,374.—A. G. O., 59,720.									
	Causes o fadmission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1	Typhoid fever	15	0.26				2	20	0.03	2.76	0.05
1a	Paratyphoid fever	3	.05							.40	.01
4	Malaria	830	14.22							17.30	.30
	Estivo-autumnal fever	56	.96							1.55	.03
	Malarial cachexia	8	.14							.83	.01
	Quartan malarial fever	7	.12							.19	.003
	Tertian malarial fever	718	12.30							14.09	.24
	Undetermined malarial fever	41	.70							.64	.01
5	Smallpox and varioloid	6	.10							.52	.01
5b	Vaccinia	750	12.85							7.38	.13
6	Measles	426	7.30	6	6	0.10	12	12	.20	25.11	.43
7	Scarlet fever	14	.24							1.09	.02
9	Diphtheria	76	1.30							4.07	.07
10	Influenza	972	16.65							15.02	.26
13	Cholera nostras	3	.05							.02	.0004
14	Dysentery	104	1.78	7	6	.10	1	1	.02	8.56	.15
	Bacillary	17	.29	1	1	.02				1.06	.02
	Entamebic	54	.93	6	5	.08	1	1	.02	6.11	.10
	Unclassified	33	.57							1.39	.02
18	Erysipelas	24	.41							1.18	.02
19b	Dengue	12	.21							.22	.004
19d	German measles	226	3.87							5.04	.09
19g	Mumps	1,119	19.17	1	1	.02				47.64	.82
20	Purulent infection and septicemia	4	.07	1	1	.02	2	2	.03	1.22	.02
25	Mycoses	3	.05							.30	.005
28-34	Tuberculosis, all	190	3.25	124	100	1.67	24	16	.27	96.35	1.65
28	Tuberculosis of lungs	168	2.88	116	94	1.57	20	13	.22	91.59	1.57
29	Miliary tuberculosis, acute	3	.05				3	3	.05	.27	.005
30-34	Tuberculosis of other organs	19	.33	8	6	.10	1			4.49	.08
36	Scoliosis (rickets)	2	.03	2	2	.03				.32	.005
37-38	Venereal diseases, all	6,756	115.74	100	75	1.26	4	3	.05	348.16	5.96
37	Syphilis	1,493	25.58	48	37	.62	3	2	.03	99.13	1.70
38a	Soft chancre	1,173	20.09	2	2	.03				58.87	1.01
38b	Gonococcus infection	4,090	70.07	50	36	.60	1	1	.02	190.16	3.26
39-45	Cancer and other malignant tumors	13	.22	2	2	.03	7	6	.10	3.17	.05
46	Benign tumors	89	1.52	1	1	.02				2.72	.05
47-48	Rheumatism, articular, all	571	9.78	19	17	.28	3	3	.05	38.48	.66
47	Acute articular rheumatism	485	8.31	1	1	.02	3	3	.05	26.34	.45
48	Chronic articular rheumatism	86	1.47	18	16	.27				12.14	.21
50	Diabetes	10	.17	6	4	.07	1	1	.02	1.32	.02
51	Exophthalmic goitre	12	.21	7	6	.10				1.91	.03
56	Alcoholism and results	973	16.67	26	22	.37	9	9	.15	16.77	.29
57-58	Chronic occupational poisoning	1	.02							.03	.001
59	Other chronic poisoning, including drug habit	25	.43	7	5	.08	1	1	.02	2.02	.03
60	Encephalitis	1	.02				1	1	.02	.01	.0002
61	Simple meningitis	2	.03				2	2	.03	.13	.002
61a	Epidemic cerebrospinal meningitis	10	.17				4	4	.07	.47	.01
62	Locomotor ataxia	4	.07	4	3	.05				1.53	.03
63	Other diseases of spinal cord	10	.17	7	6	.10				2.35	.04
64	Cerebral hemorrhage, apoplexy	5	.09	2	1	.02	3	3	.05	1.11	.02
66	Paralysis without specified cause	20	.34	2	2	.03				2.49	.04
67-68	Mental alienation	190	3.26	209	166	2.78	2	2	.03	49.67	.85
69	Epilepsy	76	1.30	32	25	.42				7.34	.13
73	Neuralgia and neuritis	304	5.21	21	16	.27				15.45	.26
75a	Follicular conjunctivitis	9	.15							.20	.003
75b	Trachoma	23	.39	3	3	.05				1.19	.02
77	Pericarditis	3	.05							.11	.002
78	Acute endocarditis	6	.10	1	1	.02				.53	.01
79	Organic heart disease	96	1.64	51	44	.74	13	12	.20	13.15	.23
80	Angina pectoris	15	.26	1	1	.02	1	1	.02	.96	.02
81	Diseases of the arteries, atheroma, aneurysm, etc	13	.22	1	1	.02	4	4	.07	1.80	.03

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[1] Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United Alaska, year 1912.

United States, continental, excluding Alaska, white.										United States, continental, excluding Alaska, colored.									
S. G. O., 55,886.—A. G. O., 57,232.										S. G. O., 2,488.—A. G. O., 2,488.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
15	0.27				2	2	0.03	2.76	0.05										
3	.05							.40	.01										
819	14.65							1.71	.31	11	4.42							0.15	0.06
56	1.00							1.55	.03										
8	.14							.83	.01										
7	.13							.19	.003										
713	12.76							14.00	.25	5	2.01							.09	.04
35	.63							.58	.01	6	2.41							.06	.02
6	.11							.52	.01										
745	13.33							7.28	.13	5	2.01							.10	.04
422	7.55	6	6	0.10	12	12	.21	24.80	.44	4	1.61							.32	.13
14	.25							1.09	.02										
76	1.36							4.07	.07										
956	17.10							14.77	.26	16	6.43							.24	.10
3	.05							.02	.0004										
99	1.77	6	6	.10	1	1	.02	7.68	.14	5	2.01	1						.89	.36
14	.25	1	1	.02				.88	.02	3	1.21							.18	.07
53	.95	5	5	.09	1	1	.02	5.47	.10	1	.40	1						.64	.26
32	.57							1.33	.02	1	.40							.07	.03
23	.41							1.09	.02	1	.40							.09	.04
12	.21							.22	.004										
226	4.04							5.01	.09									.03	.01
1,106	19.79	1	1	.02				46.97	.84	13	5.23							.67	.27
4	.07	1	1	.02	2	2	.03	1.22	.02										
3	.05							.30	.005										
183	3.27	119	96	1.68	18	12	.21	90.84	1.63	7	2.81	5	4	1.61	6	4	1.61	5.51	2.21
164	2.94	111	90	1.57	16	11	.19	86.41	1.55	4	1.61	5	4	1.61	4	2	.80	5.18	2.08
1	.02				1	1	.02	.02	.0003	2	.80				2	2	.80	.25	.10
18	.32	8	6	.10	1			4.41	.08	1	.40							.08	.03
2	.04	2	2	.03				.32	.01										
6,496	116.24	97	72	1.26	4	3	.05	334.36	5.98	260	104.50	3	3	1.21				13.81	5.55
1,444	25.84	46	35	.61	3	2	.03	93.89	1.68	49	19.69	2	2	.80				5.24	2.11
1,147	20.52	2	2	.03				57.61	1.03	26	10.45							1.25	.50
3,905	69.87	49	35	.61	1	1	.02	182.85	3.27	185	74.36	1	1	.40				7.31	2.94
13	.23	2	2	.03	7	6	.10	3.17	.06										
88	1.57	1	1	.02				2.69	.05	1	.40							.03	.01
545	9.75	18	16	.28	3	3	.05	37.20	.67	26	10.45	1	1	.40				1.28	.51
469	8.39	1	1	.02	3	3	.05	25.23	.45	16	6.43							1.10	.44
76	1.36	17	15	.26				11.96	.21	10	4.02	1	1	.40				.18	.07
10	.18	6	4	.07	1	1	.02	1.32	.02										
12	.21	7	6	.10				1.91	.03										
956	17.11	25	22	.38	9	9	.16	15.96	.29	17	6.83	1						.82	.33
1	.02							.03	.001										
24	.43	6	5	.09	1	1	.02	1.76	.03	1	.40	1						.26	.10
1	.02				1	1	.02	.01	.0002										
2	.04				2	2	.03	.13	.002										
10	.18				4	4	.07	.47	.01										
4	.07	4	3	.05				1.53	.03										
10	.18	7	6	.10				2.35	.04										
5	.09	2	1	.02	3	3	.05	1.11	.02										
19	.34	2	2	.03				2.48	.04	1	.40							.01	.004
182	3.26	202	161	2.81	2	2	.03	47.71	.85	8	3.22	7	5	2.01				1.95	.79
72	1.29	31	24	.42				6.95	.12	4	1.61	1	1	.40				.39	.16
288	5.15	20	15	.26				14.43	.26	16	6.43	1	1	.40				1.02	.41
9	.16							.20	.004										
23	.41	3	3	.05				1.19	.02										
3	.05							.11	.002										
6	.11	1	1	.02				.53	.01										
93	1.66	50	43	.75	11	11	.19	12.44	.22	3	1.21	1	1	.40	2	1	.40	.71	.29
15	.27	1	1	.02	1	1	.02	.96	.02										
12	.21	1	1	.02	3	3	.05	1.80	.03	1	.40				1	1	.40	.003	.00

[2] Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with* *States (continental) excluding*

International classification.	Mean strength.	United States, continental, excluding Alaska, total.									
		S. G. O., 58,374.—A. G. O., 59,720.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
82	Embolism and thrombosis	1	0.02	....	....	....	1	1	0.02	0.01	0.0001
83b	Hemorrhoids	329	5.64	1	1	0.02	....	....	....	10.07	.17
83d	Varicose veins	50	.86	....	....	....	....	....	....	3.59	.06
83e	Varicocele	111	1.90	3	1	.02	....	....	....	6.63	.11
84	Diseases of the lymphatic system	272	4.66	....	....	....	....	....	....	13.93	.24
86	Diseases of the nasal fossæ	774	13.26	3	2	.03	....	....	....	9.82	.17
87	Diseases of the larynx	209	3.58	....	....	....	....	....	....	3.48	.06
88	Diseases of the thyroid body	8	.14	2	1	.02	1	1	.02	.86	.01
89-90	Bronchitis	2,232	38.24	8	7	.12	....	....	....	46.84	.80
91	Broncho-pneumonia	28	.48	....	....	....	4	4	.07	2.92	.05
92	Pneumonia	139	2.38	2	2	.03	12	12	.20	10.80	.18
93	Pleurisy	199	3.41	2	2	.03	....	....	....	13.84	.24
94	Pulmonary congestion and pulmonary apoplexy	23	.39	....	....	....	2	2	.03	.28	.005
96	Asthma	46	.79	6	2	.03	....	....	....	3.46	.06
98a	Hemoptysis	6	.10	....	....	....	....	....	....	.14	.002
98b	Hay fever	4	.07	....	....	....	....	....	....	.17	.003
99a	Diseases of the teeth and gums	305	5.22	....	....	....	....	....	....	4.83	.08
99b	Other diseases of the mouth and annexa	43	.74	1	1	.02	....	....	....	1.87	.03
100	Diseases of the pharynx	4,346	74.45	....	....	....	....	....	....	61.22	1.05
102	Ulcer of stomach	6	.10	3	3	.05	1	1	.02	1.34	.02
103	Other diseases of stomach (cancer excepted)	688	11.79	1	1	.02	....	....	....	11.64	.20
105	Diarrhea and enteritis	1,381	23.66	3	2	.03	1	1	.02	18.69	.32
107	Intestinal parasites	139	2.38	....	....	....	....	....	....	2.76	.05
108	Appendicitis	400	6.85	....	....	....	5	4	.07	30.08	.52
109	Hernia	245	4.20	22	22	.37	....	....	....	26.99	.45
110a	Diseases of the anus and fæcal fistula	37	.63	2	2	.03	....	....	....	2.90	.05
110b	Other diseases of the intestines	1,284	22.00	2	2	.03	1	1	.02	16.87	.29
113	Cirrhosis of liver	4	.07	....	....	....	1	1	.02	.35	.01
114	Biliary calculi	14	.24	....	....	....	1	1	.02	1.07	.02
115	Other diseases of liver and gall bladder	181	3.10	....	....	....	....	....	....	9.87	.17
117	Simple peritonitis	3	.05	1	1	.02	2	2	.03	.28	.005
119	Acute nephritis	27	.46	....	....	....	6	6	.10	1.58	.03
120	Bright's disease	36	.62	16	14	.23	7	6	.10	7.01	.12
122	Other diseases of the kidney and annexa	20	.34	4	3	.05	....	....	....	1.70	.03
124	Diseases of the bladder	163	2.79	30	21	.35	....	....	....	9.65	.17
125	Diseases of the urethra, urinary abscess, etc	80	1.37	....	....	....	....	....	....	1.37	.02
126	Diseases of the prostate	2	.03	....	....	....	....	....	....	.09	.002
127	Diseases of the male genital organs (nonvenereal)	344	5.89	2	1	.02	....	....	....	10.14	.17
143	Furuncle and carbuncle	815	13.96	....	....	....	....	....	....	14.28	.24
144	Acute abscess and cellulitis	597	10.23	....	....	....	....	....	....	15.10	.26
146	Diseases of the bones	109	1.87	9	7	.12	....	....	....	9.35	.16
147	Diseases of the joints	188	3.22	15	12	.20	....	....	....	13.70	.23
150	Congenital malformations	230	3.94	1	1	.02	....	....	....	7.27	.12
189Aa	Febricula, simple continued, and other fevers of undetermined causation	113	1.94	....	....	....	....	....	....	2.38	.04
189Ba	Under observation, undiagnosed and unknown	125	2.14	1	1	.02	1	1	.02	8.79	.15
189Bb	Malingering	30	.51	....	....	....	....	....	....	1.34	.02
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[3]										
155-163	Suicides, all	18	.31	....	....	....	47	47	.79	....	....
164	Poisoning by food	59	1.01	....	....	....	....	....	....	....	....
165a	Venomous bites and stings	53	.91	....	....	....	....	....	....	....	....
165b	Other poisoning (deleterious gases excepted)	25	.43	....	....	....	6	6	.10	....	....
166	Conflagration	2	.03	....	....	....	....	....	....	....	....
167	Burns (conflagrations excepted)	161	2.76	....	....	....	....	....	....	....	....
168	Absorption of deleterious gases	3	.05	....	....	....	2	2	.03	....	....
169	Drowning, accidental	....	....	....	....	....	24	24	.40	....	....

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[1] Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

[3] Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United Alaska, year 1912—Continued.

United States, continental, excluding Alaska, white.											United States, continental, excluding Alaska, colored.										
S. G. O., 55,886.—A. G. O., 57,232.											S. G. O., 2,488.—A. G. O., 2,488.										
Admissions.		Discharges.			Deaths.			Noneffective.			Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1	0.02	....	...	....	1	1	0.02	0.01	0.0001	....	....	...	...	....	...	...	....	....	....
309	5.53	1	1	0.02	...	...	....	9.43	.17	20	8.04	...	...	....	...	...	....	0.63	0.25
50	.89	....	...	....	...	...	....	3.59	.06	....	....	...	...	....	...	...	....	....	....
110	1.97	3	1	.02	...	...	....	6.57	.12	1	.40	...	...	....	...	...	....	.06	.02
266	4.76	....	...	....	...	...	....	13.73	.25	6	2.41	...	...	....	...	...	....	.20	.08
761	13.62	3	2	.03	...	...	....	9.69	.17	13	5.23	...	...	....	...	...	....	.13	.05
206	3.69	....	...	....	...	...	....	3.46	.06	3	1.21	...	...	....	...	...	....	.02	.01
8	.14	2	1	.02	1	1	.02	.86	.02	....	....	...	...	....	...	...	....	....	....
2,150	38.47	8	7	.12	...	...	....	45.36	.81	82	32.96	...	...	....	...	...	....	1.48	.59
27	.48	....	...	....	4	4	.07	2.73	.05	1	.40	...	...	....	...	...	....	.19	.08
132	2.36	2	2	.03	11	11	.19	10.38	.19	7	2.81	...	...	....	1	1	0.40	.41	.16
189	3.38	2	2	.03	...	...	....	13.01	.23	10	4.02	...	...	....	...	...	....	.83	.33
23	.41	....	...	....	2	2	.03	.28	.005	....	....	...	...	....	...	...	....	....	....
43	.77	6	2	.03	...	...	....	3.40	.06	3	1.21	...	...	....	...	...	....	.05	.02
6	.11	....	...	....	...	...	....	.14	.003	....	....	...	...	....	...	...	....	....	....
4	.07	....	...	....	...	...	....	.17	.003	....	....	...	...	....	...	...	....	....	....
293	5.24	....	...	....	...	...	....	4.49	.08	12	4.82	...	...	....	...	...	....	.34	.14
42	.75	1	1	.02	...	...	....	1.86	.03	1	.40	...	...	....	...	...	....	.01	.004
4,260	76.23	....	...	....	...	...	....	60.08	1.07	86	34.56	...	...	....	...	...	....	1.15	.46
6	.11	3	3	.05	1	1	.02	1.34	.02	....	....	...	...	....	...	...	....	....	....
680	12.17	1	1	.02	...	...	....	11.53	.21	8	3.22	...	...	....	...	...	....	.11	.05
1,324	23.69	3	2	.03	1	1	.02	17.73	.32	57	22.91	...	...	....	...	...	....	.96	.39
137	2.45	....	...	....	...	...	....	2.66	.05	2	.80	...	...	....	...	...	....	.10	.04
386	6.91	....	...	....	5	4	.07	29.26	.52	14	5.63	...	...	....	...	...	....	.82	.33
237	4.24	22	22	.38	...	...	....	24.63	.44	8	3.22	...	...	....	...	...	....	1.36	.55
37	.66	2	2	.03	...	...	....	2.90	.05	....	....	...	...	....	...	...	....	....	....
1,235	22.10	2	2	.03	1	1	.02	16.06	.29	49	19.69	...	...	....	...	...	....	.81	.33
4	.07	....	...	....	1	1	.02	.35	.01	....	....	...	...	....	...	...	....	....	....
14	.25	....	...	....	1	1	.02	1.07	.02	....	....	...	...	....	...	...	....	....	....
167	2.99	....	...	....	...	...	....	8.81	.16	14	5.63	...	...	....	...	...	....	1.06	.43
3	.05	1	1	.02	2	2	.03	.28	.005	....	....	...	...	....	...	...	....	....	....
26	.47	....	...	....	6	6	.10	1.54	.03	1	.40	...	...	....	...	...	....	.05	.02
34	.61	15	13	.23	7	6	.10	6.52	.12	2	.80	1	1	0.40	...	...	....	.50	.20
20	.36	4	3	.05	...	...	....	1.70	.03	....	....	...	...	....	...	...	....	....	....
155	2.77	29	20	.35	...	...	....	9.29	.17	8	2.22	1	1	.40	...	...	....	.36	.14
78	1.40	....	...	....	...	...	....	1.35	.02	2	.80	...	...	....	...	...	....	.02	.01
2	.04	....	...	....	...	...	....	.09	.002	....	....	...	...	....	...	...	....	....	....
332	5.94	2	1	.02	...	...	....	9.82	.18	12	4.82	...	...	....	...	...	....	.32	.13
805	14.41	....	...	....	...	...	....	14.11	.25	10	4.02	...	...	....	...	...	....	.17	.07
584	10.45	....	...	....	...	...	....	14.92	.27	13	5.23	...	...	....	...	...	....	.18	.07
99	1.77	9	7	.12	...	...	....	8.79	.16	10	4.02	...	...	....	...	...	....	.56	.23
174	3.11	15	12	.21	...	...	....	12.84	.23	14	5.63	...	...	....	...	...	....	.86	.34
223	3.99	1	1	.02	...	...	....	7.08	.13	7	2.81	...	...	....	...	...	....	.19	.08
110	1.97	....	...	....	...	...	....	2.34	.04	3	1.21	...	...	....	...	...	....	.03	.01
120	2.15	1	1	.02	1	1	.02	8.28	.15	5	2.01	...	...	....	...	...	....	.51	.21
30	.54	....	...	....	...	...	....	1.34	.02	....	....	...	...	....	...	...	....	....	....
17	.30	....	...	....	44	44	.77	....	......	1	.40	...	...	....	3	3	1.21	......	......
59	1.06	....	...	....	...	...	....	....	......	....	....	...	...	....	...	...	....	......	......
51	.91	....	...	....	...	...	....	....	......	2	.80	...	...	....	...	...	....	......	......
24	.43	....	...	....	6	6	.10	....	......	1	.40	...	...	....	...	...	....	......	......
2	.04	....	...	....	...	...	....	....	......	....	....	...	...	....	...	...	....	......	......
155	2.77	....	...	....	...	...	....	....	......	6	2.41	...	...	....	...	...	....	......	......
3	.05	....	...	....	2	2	.03	....	......	....	....	...	...	....	...	...	....	......	......
......	......	....	...	....	23	23	.40	....	......	....	....	...	...	....	1	1	.40	......	......

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[2] Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE No. 71.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with States (continental) excluding*

International classification.		United States, continental, excluding Alaska, total.									
	Mean strength	S. G. O., 58,374.—A. G. O., 59,720.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES—continued.										
170	Traumatism by firearms (other than specified)	121	2.07	15	12	0.20	7	7	0.12	......	......
170a	Shot by sentry or guard	6	.10	....	...	.....	3	3	.05	......	......
171	Traumatism by cutting or piercing instruments	617	10.57	8	6	.10	1	1	.02	......	......
172	Traumatism by fall	2,771	47.47	24	17	.28	10	10	.17	......	......
174	Traumatism by machines	73	1.25	3	3	.05	1	1	.02	......	......
175	Traumatism by other crushing	117	2.00	8	5	.08	18	18	.30	......	......
176	Injuries by animals	831	14.24	6	5	.08	...	...	....	......	......
178	Effects of excessive cold	44	.75	2	2	.03	...	...	....	......	......
179	Effects of heat	84	1.44	....	...	.....	1	1	.02	......	......
180	Effects of lightning	5	.09	....	...	.....	2	2	.03	......	......
182-4	Homicides, all	6	.10	....	...	.....	13	13	.22	......	......
185	Fractures, causes not specified	7	.12	....	...	.....	1	1	.02	......	......
186	Other external violence	3,272	56.05	32	26	.44	...	...	....	......	......
	Killed or wounded in action, by bullet	......	......	1	...	.....	...	...	....	......	......
155-186	Total for external causes	8,275	141.76	99	77	1.29	136	136	2.28	267.06	4.58
	DISEASES AND INJURIES GROUPED.										
	General diseases	13,639	233.65	315	252	4.22	69	59	.99	658.50	11.28
1-19	Epidemic diseases	4,964	85.04	14	13	.22	15	15	.25	142.76	2.45
20-59	Other general diseases	8,675	148.61	301	239	4.00	54	44	.74	515.74	8.83
	Diseases of the nervous system and organs of special sense	1,606	27.51	344	277	4.64	13	13	.22	124.69	2.14
60-74	Of the nervous system	802	13.74	298	237	3.97	12	12	.20	90.48	1.55
75	Of the eye and its annexa	526	9.01	15	15	.25	...	...	....	19.54	.33
76	Of the ear and its annexa	278	4.76	31	25	.42	1	1	.02	14.67	.25
77-85	Diseases of the circulatory system	986	16.89	67	56	.94	19	18	.30	56.19	.96
86-98	Diseases of the respiratory system	3,699	63.37	24	17	.28	20	20	.33	93.49	1.60
99-118	Diseases of the digestive system	9,082	155.58	36	35	.59	13	12	.20	190.10	3.26
119-127	Diseases of the genito-urinary system	702	12.03	53	39	.65	13	12	.20	32.48	.56
142-145	Diseases of the skin and cellular tissue	3,104	53.17	11	11	.18	1	1	.02	74.51	1.28
146-149	Diseases of the organs of locomotion	1,503	25.75	117	99	1.66	...	...	....	67.39	1.15
150	Malformations, etc	230	3.94	1	1	.02	...	...	....	7.27	.12
189	Ill-defined diseases	295	5.05	1	1	.02	1	1	.02	12.73	.22
	Total for disease	34,846	596.94	969	788	13.19	149	136	2.28	1,317.34	22.57
155-186	External causes	8,275	141.76	99	77	1.29	136	136	2.28	267.06	4.58
	Total for disease and external causes.	43,121	738.70	1,068	865	14.48	285	272	4.55	1,584.40	27.15

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[1] Including those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

ratios per 1,000 of mean strength, for enlisted American troops serving in the United Alaska, year 1912—Continued.

United States, continental, excluding Alaska, white.										United States, continental, excluding Alaska colored.									
S. G. O., 55,886.—A. G. O., 57,232.										S. G. O., 2,488.—A. G. O., 2,488.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
119	2.13	15	13	0.23	6	6	0.10	.....	.....	2	0.80	.....	.....	.....	1	1	0.40	.....	.....
6	.11	.....	.....	.....	2	2	.03	.....	.....	.....	.....	.....	.....	.....	1	1	.40	.....	.....
580	10.38	8	6	.10	1	1	.02	.....	.....	37	14.87	.....	.....	.....	.....	.....	.....	.....	.....
2,635	47.15	24	17	.30	10	10	.17	.....	.....	136	54.66	.....	.....	.....	.....	.....	.....	.....	.....
71	1.27	3	3	.05	1	1	.02	.....	.....	2	.80	.....	.....	.....	.....	.....	.....	.....	.....
115	2.06	7	5	.09	17	17	.30	.....	.....	2	.80	1	.....	.....	1	1	.40	.....	.....
755	13.51	5	4	.07	.....	.....	.....	.....	.....	76	30.55	1	1	0.40	.....	.....	.....	.....	.....
36	.64	2	2	.03	.....	.....	.....	.....	.....	8	3.22	.....	.....	.....	.....	.....	.....	.....	.....
82	1.47	.....	.....	.....	1	1	.02	.....	.....	2	.80	.....	.....	.....	.....	.....	.....	.....	.....
5	.09	.....	.....	.....	2	2	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.07	.....	.....	.....	9	9	.16	.....	.....	2	.80	.....	.....	.....	4	4	1.61	.....	.....
7	.13	.....	.....	.....	1	1	.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3,067	54.88	32	26	.45	.....	.....	.....	.....	.....	121	48.63	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7,877	140.95	97	76	1.33	125	125	2.18	252.00	4.51	398	159.97	2	1	.40	11	11	4.42	15.06	6.06
13,262	237.30	303	244	4.26	63	55	.96	633.99	11.34	377	151.53	12	8	3.22	4	4	1.61	24.51	9.85
4,899	87.66	13	13	.23	15	15	.26	139.95	2.50	65	26.13	1	.....	.....	.....	.....	.....	2.80	1.13
8,363	149.64	290	231	4.04	48	40	.70	494.04	8.84	312	125.40	11	8	3.22	4	4	1.61	21.70	8.72
1,537	27.50	335	270	4.72	13	13	.23	119.99	2.15	69	27.73	9	7	2.81	.....	.....	.....	4.70	1.89
769	13.76	289	230	4.02	12	12	.21	86.94	1.56	33	13.26	9	7	2.81	.....	.....	.....	3.54	1.42
500	8.95	15	15	.26	.....	.....	.....	18.62	.33	26	10.45	.....	.....	.....	.....	.....	.....	.92	.37
268	4.80	31	25	.44	1	1	.02	14.43	.26	10	4.02	.....	.....	.....	.....	.....	.....	.23	.09
950	17.00	66	55	.96	16	16	.28	54.46	.97	36	14.47	1	1	.40	3	2	.80	1.73	.70
3,580	64.06	24	17	.30	19	19	.33	90.37	1.62	119	47.83	.....	.....	.....	1	1	.40	3.11	1.25
8,831	158.02	36	35	.61	13	12	.21	183.36	3.28	251	100.88	.....	.....	.....	.....	.....	.....	6.74	2.71
675	12.08	51	37	.65	13	12	.21	31.20	.56	27	10.85	2	2	.80	.....	.....	.....	1.28	.52
3,040	54.40	11	11	.19	1	1	.02	72.97	1.31	64	25.72	.....	.....	.....	.....	.....	.....	1.54	.62
1,427	25.53	116	98	1.71	.....	.....	.....	64.22	1.15	76	30.55	1	1	.40	.....	.....	.....	3.17	1.27
223	3.99	1	1	.02	.....	.....	.....	7.08	.13	7	2.81	.....	.....	.....	.....	.....	.....	.19	.08
287	5.14	1	1	.02	1	1	.02	12.18	.22	8	3.22	.....	.....	.....	.....	.....	.....	.54	.22
33,812	605.02	944	769	13.44	139	129	2.25	1,269.82	22.72	1,034	415.59	25	19	7.64	10	7	2.81	47.51	19.09
7,877	140.95	97	76	1.33	125	125	2.18	252.00	4.51	398	159.97	2	1	.40	11	11	4.42	15.06	6.06
41,689	745.97	1,041	845	14.77	264	254	4.44	1,521.83	27.23	1,432	575.56	27	20	8.04	21	18	7.23	62.57	25.15

[2] Excluding those occurring in the United States proper of cases from commands on duty in Alaska or insular possessions.

TABLE 72.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with* *men, year*

International classification.		Total.									
	Mean strength	12,357.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1	Typhoid fever	5	0.40	...	...	...	...	...	...	1.14	0.09
1a	Paratyphoid fever	1	.08	...	...	...	...	...	...	.04	.004
4	Malaria	2,113	171.00	...	...	...	4	4	0.32	43.38	3.51
	Estivo-autumnal fever	572	46.29	...	...	...	4	4	.32	15.22	1.23
	Malarial cachexia	5	.40	...	...	...	...	...	...	.49	.04
	Quartan malarial fever	11	.89	...	...	...	...	...	...	.28	.02
	Tertian malarial fever	1,460	118.15	...	...	...	...	...	...	26.15	2.12
	Undetermined malarial fever	65	5.26	...	...	...	...	...	...	1.23	.10
5b	Vaccinia	13	1.05	...	...	...	...	...	...	.19	.02
6	Measles	34	2.75	...	...	...	...	...	...	2.96	.24
9	Diphtheria	2	.16	...	...	...	...	...	...	.30	.02
10	Influenza	41	3.32	...	...	...	...	...	...	.79	.06
14	Dysentery	209	16.91	...	1	0.08	1	1	.08	13.89	1.12
	Bacillary	11	.89	...	...	...	...	...	...	.44	.04
	Entamœbic	167	13.51	...	1	.08	1	1	.08	12.35	1.00
	Unclassified	31	2.51	...	...	...	...	...	...	1.10	.09
18	Erysipelas	2	.16	...	...	...	...	...	...	.04	.003
19b	Dengue	1,346	108.93	...	...	...	...	...	...	23.53	1.90
19d	German measles	1	.08	...	...	...	...	...	...	.02	.001
19e	Hemoglobinuric fever	...	...	...	...	...	...	...	...	.11	.01
19g	Mumps	121	9.79	...	...	...	...	...	...	9.32	.76
20	Purulent infection and septicemia	1	.08	...	...	...	1	1	.08	.02	.001
25	Mycoses	6	.49	...	...	...	...	...	...	.40	.03
28-34	Tuberculosis, all	62	5.02	...	18	1.46	...	7	.57	6.57	.53
28	Tuberculosis of lungs	57	4.61	...	17	1.38	...	6	.49	5.54	.45
30-34	Tuberculosis of other organs	5	.40	...	1	.08	...	1	.08	1.03	.08
36	Scoliosis (rickets)	...	...	...	...	...	...	...	...	.04	.003
37-38	Venereal diseases, all	3,079	249.17	...	14	1.13	3	3	.24	204.55	16.55
37	Syphilis	528	42.73	...	5	.40	3	3	.24	38.03	3.08
38a	Soft chancre	832	67.33	...	...	...	...	...	...	53.71	4.35
38b	Gonococcus infection	1,719	139.11	...	9	.73	...	...	...	112.80	9.13
39-45	Cancer and other malignant tumors	2	.16	...	...	...	...	1	.08	.41	.03
46	Benign tumors	12	.97	...	...	...	...	...	...	.50	.04
47-48	Rheumatism, articular, all	80	6.47	...	1	.08	1	1	.08	4.11	.44
47	Acute articular rheumatism	60	4.86	...	...	...	1	1	.08	2.79	.23
48	Chronic articular rheumatism	20	1.62	...	1	.08	...	...	...	1.33	.11
50	Diabetes	2	.16	...	1	.08	...	...	...	.17	.01
51	Exophthalmic goiter	2	.16	...	1	.08	...	...	...	.40	.03
56	Alcoholism and results	262	21.20	...	3	.24	3	3	.24	4.36	.35
59	Other chronic poisoning, including drug habit	2	.16	...	2	.16	...	...	...	.27	.02
61a	Epidemic cerebrospinal meningitis	2	.16	...	...	...	1	1	.08	.22	.02
62	Locomotor ataxia	2	.16	...	1	.08	...	...	...	.37	.03
63	Other diseases of spinal cord	...	...	...	...	...	...	...	...	.03	.002
64	Cerebral hemorrhage, apoplexy	...	...	...	1	.08	...	...	...	.04	.003
66	Paralysis without specified cause	2	.16	...	1	.08	...	...	...	.29	.02
67-68	Mental alienation	44	3.56	...	27	2.19	...	...	...	4.25	.34
69	Epilepsy	8	.65	...	3	.24	...	...	...	.52	.04
73	Neuralgia and neuritis	102	8.25	...	2	.16	...	...	...	4.46	.36
75b	Trachoma	2	.16	...	...	...	...	...	...	.04	.004
77	Pericarditis	3	.24	...	...	...	...	...	...	.62	.05
78	Acute endocarditis	...	...	...	...	...	...	...	...	.12	.01
79	Organic heart disease	13	1.05	...	1	.08	1	2	.16	.75	.06
80	Angina pectoris	1	.08	...	...	...	1	1	.08	.003	.0002
81	Diseases of the arteries, atheroma, aneurism, etc	3	.24	...	...	...	1	1	.08	.24	.02
83b	Hemorrhoids	108	8.74	...	...	...	...	...	...	3.62	.29
83d	Varicose veins	7	.57	...	...	...	...	...	...	.45	.04
83e	Varicocele	52	4.21	...	...	...	...	...	...	3.00	.24
84	Diseases of the lymphatic system	132	10.68	...	...	...	...	...	...	8.46	.69
86	Diseases of the nasal fossae	137	11.09	...	...	...	...	...	...	2.74	.22
87	Diseases of the larynx	11	.89	...	...	...	...	...	...	.12	.01
88	Diseases of the thyroid body	3	.24	...	1	.08	...	...	...	.12	.01
89-90	Bronchitis	269	21.77	...	...	...	...	...	...	7.22	.58

[1] Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted 1912.

White.										Colored.									
11,006.										1,351.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
5	0.45	...	...	...	...	...	...	1.14	0.10	...	...	...	...	...	...	...	...	...	...
1	.09	...	...	...	...	...	...	.04	.004	...	...	...	...	...	...	...	...	...	...
2,051	186.35	...	...	...	4	4	0.36	41.84	3.80	62	45.89	...	...	...	...	...	...	1.54	1.14
537	48.79	...	...	...	4	4	.36	14.29	1.30	35	25.91	...	...	...	...	...	...	.93	.69
5	.45	...	...	...	...	...	...	.49	.04	...	...	...	...	...	...	...	...	...	...
10	.91	...	...	...	...	...	...	.25	.02	1	.74	...	...	...	...	...	...	.02	.02
1,449	131.66	...	...	...	...	...	...	25.90	2.35	11	8.14	...	...	...	...	...	...	.26	.19
50	4.54	...	...	...	...	...	...	.90	.08	15	11.10	...	...	...	...	...	...	.33	.24
12	1.09	...	...	...	...	...	...	.19	.02	1	.74	...	...	...	...	...	...	.01	.01
20	1.82	...	...	...	...	...	...	2.16	.20	14	10.36	...	...	...	...	...	...	.81	.60
2	.18	...	...	...	...	...	...	.30	.03	...	...	...	...	...	...	...	...	...	...
24	2.18	...	...	...	...	...	...	.45	.04	17	12.58	...	...	...	...	...	...	.34	.25
199	18.08	...	...	...	1	1	.09	13.37	1.21	10	7.40	...	1	0.74	...	...	...	.53	.39
11	1.00	...	...	...	...	...	...	.44	.04	...	...	...	...	...	...	...	...	...	...
159	14.45	...	...	...	1	1	.09	11.94	1.08	8	5.92	...	1	.74	...	...	...	.41	.31
29	2.63	...	...	...	...	...	...	.99	.09	2	1.48	...	...	...	...	...	...	.11	.08
2	.18	...	...	...	...	...	...	.04	.004	...	...	...	...	...	...	...	...	...	...
1,119	101.67	...	...	...	...	...	...	18.58	1.69	227	168.02	...	...	...	...	...	...	4.95	3.67
1	.09	...	...	...	...	...	...	.02	.001	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	.11	.02	...	...	...	...	...	...	...	...	...	...
117	10.63	...	...	...	...	...	...	8.84	.80	4	2.96	...	...	...	...	...	...	.48	.36
1	.09	...	...	...	1	1	.09	.02	.001	...	...	...	...	...	...	...	...	...	...
6	.54	...	...	...	...	...	...	.40	.04	...	...	...	...	...	...	...	...	...	...
48	4.36	...	17	1.54	...	5	.45	5.15	.47	14	10.36	...	1	.74	...	2	1.48	1.42	1.05
45	4.09	...	16	1.45	...	4	.36	4.37	.40	12	8.88	...	1	.74	...	2	1.48	1.17	.86
3	.27	...	1	.09	...	1	.09	.78	.08	2	1.48	...	...	...	...	...	...	.25	.19
...	...	...	...	...	...	...	...	.04	.003	...	...	...	...	...	...	...	...	...	...
2,371	215.43	...	14	1.27	2	2	.18	175.23	15.92	708	524.06	...	...	...	1	1	.74	29.32	21.70
496	45.07	...	5	.45	2	2	.18	35.24	3.20	32	23.69	...	...	...	1	1	.74	2.79	2.07
617	56.06	...	...	...	...	...	...	45.08	4.10	215	159.14	...	...	...	...	...	...	8.64	6.39
1,258	114.30	...	9	.82	...	...	...	94.92	8.62	461	341.23	...	...	...	...	...	...	17.89	13.24
2	.18	...	...	...	...	1	.09	.41	.04	...	...	...	...	...	...	...	...	...	...
10	.91	...	...	...	...	...	...	.48	.04	2	1.48	...	...	...	...	...	...	.02	.02
62	5.63	...	1	.09	...	...	...	3.70	.34	18	13.32	...	...	...	1	1	.74	.41	.30
44	4.00	...	...	...	...	...	...	2.54	.23	16	11.84	...	...	...	1	1	.74	.24	.18
18	1.64	...	1	.09	...	...	...	1.16	.11	2	1.48	...	...	...	...	...	...	.17	.12
2	.18	...	1	.09	...	...	...	.17	.02	...	...	...	...	...	...	...	...	...	...
2	.18	...	1	.09	...	...	...	.40	.04	...	...	...	...	...	...	...	...	...	...
244	22.17	...	2	.18	3	3	.27	4.01	.36	18	13.32	...	1	.74	...	...	...	.35	.26
1	.09	...	1	.09	...	...	...	.18	.02	1	.74	...	1	.74	...	...	...	.09	.07
2	.18	...	...	...	1	1	.09	.22	.02	...	...	...	...	...	...	...	...	...	...
2	.18	...	1	.09	...	...	...	.37	.03	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	.03	.002	...	...	...	...	...	...	...	...	...	...
...	...	...	1	.09	...	...	...	.04	.003	...	...	...	...	...	...	...	...	...	...
2	.18	...	1	.09	...	...	...	.29	.03	...	...	...	...	...	...	...	...	...	...
40	3.63	...	25	2.27	...	...	...	4.01	.36	4	2.96	...	2	1.48	...	...	...	.25	.18
8	.73	...	3	.27	...	...	...	.52	.05	...	...	...	...	...	...	...	...	...	...
79	7.18	...	2	.18	...	...	...	3.53	.32	23	17.02	...	...	...	...	...	...	.94	.69
2	.18	...	...	...	...	...	...	.04	.004	...	...	...	...	...	...	...	...	...	...
3	.27	...	...	...	...	...	...	.62	.06	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	.12	.01	...	...	...	...	...	...	...	...	...	...
13	1.18	...	1	.09	1	1	.09	.75	.07	...	...	...	...	...	...	1	.74	...	...
1	.09	...	...	...	1	1	.09	.003	.0002	...	...	...	...	...	...	...	...	...	...
2	.18	...	...	...	...	...	...	.21	.02	1	.74	...	...	...	1	1	.74	.04	.03
82	7.45	...	...	...	...	...	...	3.08	.28	26	19.24	...	...	...	...	...	...	.54	.40
6	.54	...	...	...	...	...	...	.40	.04	1	.74	...	...	...	...	...	...	.05	.04
51	4.63	...	...	...	...	...	...	2.99	.27	1	.74	...	...	...	...	...	...	.01	.01
123	11.18	...	...	...	...	...	...	8.22	.75	9	6.66	...	...	...	...	...	...	.25	.18
118	10.72	...	...	...	...	...	...	2.57	.23	19	14.06	...	...	...	...	...	...	.16	.12
5	.45	...	...	...	...	...	...	.05	.004	6	4.44	...	...	...	...	...	...	.07	.05
3	.27	...	1	.09	...	...	...	.12	.01	...	...	...	...	...	...	...	...	...	...
204	18.54	...	...	...	...	...	...	5.88	.53	65	48.11	...	...	...	...	...	...	1.34	.99

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[2] Number of discharges and deaths including those of cases invalided home and deducted from the United States.

TABLE 72.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with*
men, year

International classification.		Total.									
	Mean strength	12,357.									
		Admissions.		Discharges.			Deaths.			Noneffective.	
	Causes of admission to sick report.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
91	Bronchopneumonia	3	0.24	...	...	...	...	...	...	0.80	0.06
92	Pneumonia	18	1.46	...	...	...	...	...	...	2.12	.17
93	Pleurisy	33	2.67	...	...	...	...	...	...	2.69	.22
96	Asthma	13	1.05	...	4	0.32	...	...	...	.48	.04
99a	Diseases of the teeth and gums	137	11.09	...	...	...	...	...	...	2.99	.24
99b	Other diseases of the mouth and annexa	11	.89	...	...	...	...	...	...	.23	.02
100	Diseases of the pharynx	426	34.47	...	...	...	...	...	...	7.45	.60
102	Ulcer of stomach	3	.24	...	...	...	...	...	...	.42	.03
103	Other diseases of stomach (cancer excepted)	250	20.23	...	...	...	1	1	0.08	5.64	.46
105	Diarrhea and enteritis	750	60.69	...	1	.08	...	...	...	13.02	1.05
107	Intestinal parasites	24	1.94	...	...	...	...	...	...	.49	.04
108	Appendicitis	70	5.66	...	...	...	2	3	.24	7.25	.59
109	Hernia	42	3.40	...	...	...	...	...	...	5.14	.42
110a	Diseases of the anus, and fecal fistula	19	1.54	...	...	...	...	...	...	1.52	.12
110b	Other diseases of the intestines	616	49.85	...	...	...	...	...	...	8.09	.65
114	Biliary calculi	3	.24	...	...	...	...	...	...	.14	.01
115	Other diseases of liver and gall bladder	63	5.10	...	...	...	4	4	.32	4.26	.34
120	Bright's disease	9	.73	...	1	.08	1	2	.16	.78	.06
122	Other diseases of the kidney and annexa	4	.32	...	...	...	...	...	...	.08	.01
124	Diseases of the bladder	28	2.27	...	3	.24	...	...	...	1.24	.10
125	Diseases of the urethra, urinary abscess, etc.	20	1.62	...	...	...	...	...	...	.50	.04
126	Diseases of the prostate	2	.16	...	...	...	...	...	...	.19	.02
127	Diseases of the male genital organs (nonvenereal)	69	5.58	...	...	...	...	...	...	3.67	.30
143	Furuncle and carbuncle	440	35.61	...	...	...	...	...	...	10.05	.81
144	Acute abscess and cellulitis	325	26.30	...	...	...	...	...	...	9.18	.74
146	Diseases of the bones	25	2.02	...	...	...	...	...	...	2.06	.17
147	Diseases of the joints	41	3.32	...	3	.24	...	...	...	2.57	.21
150	Congenital malformations	45	3.64	...	...	...	...	...	...	1.50	.12
189Aa	Febricula, simple continued, and other fevers of undetermined causation	191	15.46	...	...	...	...	...	...	2.89	.23
189Ba	Under observation, undiagnosed and unknown	14	1.13	...	...	...	...	...	...	.41	.03
189Bb	Malingering	3	.24	...	...	...	...	...	...	.22	.02
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[3]										
155–163	Suicides, all	2	.16	...	...	...	3	3	.24	...	...
164	Poisoning by food	172	13.92	...	...	...	...	...	...	...	...
165a	Venomous bites and stings	27	2.19	...	...	...	...	...	...	...	...
165b	Other poisoning (deleterious gases excepted)	2	.16	...	...	...	...	...	...	...	...
167	Burns (conflagrations excepted)	18	1.45	...	...	...	...	...	...	...	...
168	Absorption of deleterious gases	1	.08	...	...	...	...	...	...	...	...
169	Drowning, accidental	...	...	...	...	...	13	13	1.05	...	...
170	Traumatism by firearms (other than specified)	25	2.02	...	1	.08	3	3	.24	...	...
170a	Shot by sentry or guard	1	.08	...	...	...	1	1	.08	...	...
171	Traumatism by cutting or piercing instruments	201	16.26	...	2	.16	...	...	...	...	...
172	Traumatism by fall	582	47.10	...	6	.49	3	3	.24	...	...
174	Traumatism by machines	8	.65	...	...	...	...	...	...	...	...
175	Traumatism by other crushing	26	2.10	...	3	.24	2	2	.16	...	...
176	Injuries by animals	216	17.48	...	...	...	...	...	...	...	...
179	Effect of heat	52	4.21	...	...	...	...	...	...	...	...
182–4	Homicides, all	...	...	...	...	...	4	4	.32	...	...
186	Other external violence	787	63.69	...	4	.32	1	1	.08	...	...
	Killed or wounded in action—										
	By bullet	1	.08	...	...	...	...	...	...	...	...
	By bolo, kris, etc.	1	.08	...	...	...	...	...	...	...	...
155–186	Total external causes	2,121	171.64	...	16	1.29	30	30	2.43	60.40	4.89

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[1] Number of discharges and deaths which actually occurred.

[3] Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted 1912—Continued.

White.										Colored.									
11,006.										1,351.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
3	0.27	...	...	...	...	...	...	0.80	0.07	...	...	...	...	...	...	...	...	...	...
13	1.18	...	...	...	...	...	...	1.85	.17	5	3.70	...	...	...	...	...	...	0.27	0.20
24	2.18	...	...	...	...	...	...	2.33	.21	9	6.66	...	...	...	...	...	...	.36	.27
12	1.09	...	4	.36	...	...	...	.47	.04	1	.74	...	...	...	...	...	...	.01	.01
127	11.54	...	...	...	...	...	...	2.88	.26	10	7.40	...	...	...	...	...	...	.11	.08
10	.91	...	...	...	...	...	...	.22	.02	1	.74	...	...	...	...	...	...	.01	.01
363	32.98	...	...	...	...	...	...	6.42	.58	63	46.63	...	...	...	...	...	...	1.03	.76
2	.18	...	...	...	...	...	...	.38	.03	1	.74	...	...	...	...	...	...	.04	.03
219	19.90	...	...	...	1	1	0.09	5.33	.48	31	22.95	...	...	...	...	...	...	.31	.23
638	57.97	...	1	.09	...	...	...	11.83	1.07	112	82.90	...	...	...	...	...	...	1.20	.89
22	2.00	...	...	...	...	...	...	.47	.04	2	1.48	...	...	...	...	...	...	.02	.01
64	5.82	...	...	...	2	3	.27	6.84	.62	6	4.44	...	...	...	...	...	...	.41	.30
31	2.82	...	...	...	...	...	...	4.17	.38	11	8.14	...	...	...	...	...	...	.97	.72
17	1.54	...	...	...	...	...	...	1.46	.13	2	1.48	...	...	...	...	...	...	.07	.05
459	41.70	...	...	...	...	...	...	6.49	.59	157	116.21	...	...	...	...	...	...	1.59	1.18
3	.27	...	...	...	...	...	...	.14	.01	...	...	...	...	...	...	...	...	...	...
56	5.09	...	...	...	3	3	.27	4.03	.37	7	5.18	...	...	...	1	1	0.74	.23	.17
7	.64	...	1	.09	1	2	.18	.62	.06	2	1.48	...	...	...	...	...	...	.16	.12
4	.36	...	...	...	...	...	...	.08	.01	...	...	...	...	...	...	...	...	...	...
25	2.27	...	3	.27	...	...	...	1.19	.11	3	2.22	...	...	...	...	...	...	.05	.03
16	1.45	...	...	...	...	...	...	.43	.04	4	2.96	...	...	...	...	...	...	.06	.05
2	.18	...	...	...	...	...	...	.19	.02	...	...	...	...	...	...	...	...	...	...
63	5.72	...	...	...	...	...	...	3.46	.31	6	4.44	...	...	...	...	...	...	.21	.15
379	34.44	...	...	...	...	...	...	9.04	.82	61	45.15	...	...	...	...	...	...	1.01	.75
282	25.62	...	...	...	...	...	...	8.08	.73	43	31.83	...	...	...	...	...	...	1.10	.82
20	1.82	...	...	...	...	...	...	1.67	.15	5	3.70	...	...	...	...	...	...	.40	.29
39	3.54	...	3	.27	...	...	...	2.17	.20	2	1.48	...	...	...	...	...	...	.40	.30
42	3.82	...	...	...	...	...	...	1.39	.13	3	2.22	...	...	...	...	...	...	.11	.08
186	16.90	...	...	...	...	...	...	2.86	.26	5	3.70	...	...	...	...	...	...	.04	.03
14	1.27	...	...	...	...	...	...	.41	.04	...	...	...	...	...	...	...	...	...	...
1	.09	...	...	...	...	...	...	.09	.01	2	1.48	...	...	...	...	...	...	.13	.10
2	.18	...	...	...	3	3	.27	...	...	...	...	...	...	...	...	...	...	...	...
172	15.63	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	2.09	...	...	...	...	...	...	...	...	4	2.96	...	...	...	...	...	...	...	...
2	.18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	1.45	...	...	...	...	...	...	...	...	2	1.48	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	12	12	1.09	...	...	...	...	...	...	...	1	1	.74	...	...
24	2.18	...	1	.09	3	3	.27	...	...	1	.74	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	.74	...	...	...	1	1	.74	...	...
155	14.08	...	2	.18	...	...	...	...	...	46	34.05	...	...	...	...	...	...	...	...
474	43.07	...	6	.54	3	3	.27	...	...	108	79.94	...	...	...	...	...	...	...	...
8	.73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	1.91	...	2	.18	2	2	.18	...	...	5	3.70	...	1	0.74	...	...	...	...	...
213	19.35	...	...	...	...	...	...	...	...	3	2.22	...	...	...	...	...	...	...	...
51	4.63	...	...	...	...	...	...	...	...	1	.74	...	...	...	...	...	...	...	...
...	...	...	...	...	3	3	.27	...	...	...	...	...	...	...	1	1	.74	...	...
646	58.70	...	4	.36	1	1	.09	...	...	141	104.37	...	...	...	...	...	...	...	...
1	.09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	.09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1,809	164.36	...	15	1.36	27	27	2.45	54.69	4.97	312	230.94	...	1	.74	3	3	2.22	5.71	4.22

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[2] Number of discharges and deaths including those of cases invalided home and deducted from the United States.

TABLE 72.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with men, year*

International classification.		Total.									
	Mean strength	12,357.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
	DISEASES AND INJURIES GROUPED.										
	General diseases	7,458	603.54	...	42	3.40	14	22	1.62	318.20	25.75
1-19	Epidemic diseases	3,941	318.93	...	1	.08	5	5	.40	96.06	7.77
20-59	Other general diseases	3,517	284.62	...	41	3.32	9	17	1.38	222.14	17.98
	Diseases of the nervous system and organs of special sense	454	36.74	...	40	5.24	1	1	.08	20.18	1.63
60-74	Of the nervous system	207	16.75	...	36	2.91	1	1	.08	12.55	1.02
75	Of the eye and its annexa	129	10.44	...	...	....	...	...	....	3.78	.31
76	Of the ear and its annexa	118	9.55	...	4	.32	...	...	....	3.86	.31
77-85	Diseases of the circulatory system	348	28.16	...	2	.16	3	4	.32	18.51	1.50
86-98	Diseases of the respiratory system	488	39.49	...	5	.40	...	...	....	16.31	1.32
99-118	Diseases of the digestive system	2,417	195.60	...	1	.08	7	8	.65	56.79	4.60
119-127	Diseases of the genito-urinary system	139	11.25	...	5	.40	1	2	.16	6.69	.54
142-145	Diseases of the skin and cellular tissue	1,353	109.49	...	...	....	...	...	....	37.23	3.01
146-149	Diseases of the organs of locomotion	372	30.10	...	8	.65	...	...	....	13.39	1.08
150	Malformations, etc	45	3.64	...	...	....	...	...	....	1.50	.12
189	Ill-defined diseases	214	17.32	...	...	....	...	...	....	3.59	.29
	Total for disease	13,288	1,075.34	...	103	8.34	26	37	2.99	492.39	39.85
155-186	External causes	2,121	171.64	...	16	1.29	30	30	2.43	60.40	4.89
	Total for disease and external causes	15,409	1,246.99	...	119	9.63	56	67	5.42	552.79	44.74

[1] Number of discharges and deaths which actually occurred.

ratios per 1,000 of mean strength, for Philippine Islands, American troops, enlisted 1912—Continued.

White.										Colored.									
11,006.										1,351.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
6,358	577.68	...	38	3.45	12	18	1.64	277.92	25.25	1,100	814.21	...	4	2.96	2	4	2.96	40.28	29.82
3,602	327.28	...	...	.....	5	5	.45	87.39	7.94	339	250.92	...	1	.74	...	...	.....	8.67	6.42
2,756	250.41	...	38	3.45	7	13	1.18	190.53	17.31	761	563.29	...	3	2.22	2	4	2.96	31.61	23.40
401	36.43	...	38	3.45	1	1	.09	18.31	1.66	53	39.23	...	2	1.48	...	...	.....	1.87	1.38
180	16.35	...	34	3.09	1	1	.09	11.37	1.03	27	19.99	...	2	1.48	...	...	.....	1.18	.88
107	9.72	...	...	.....	...	...	.....	3.22	.29	22	16.28	...	...	.....	...	...	.....	.55	.41
114	10.36	...	4	.36	...	...	.....	3.72	.34	4	2.96	...	...	.....	...	...	.....	.13	.10
306	27.80	...	2	.18	2	2	.18	17.52	1.59	42	31.09	...	...	.....	1	2	1.48	.99	.73
383	34.80	...	5	.45	...	...	.....	14.08	1.28	105	77.72	...	...	.....	...	...	.....	2.22	1.65
2,014	182.99	...	1	.09	6	7	.64	50.80	4.62	403	298.30	...	...	.....	1	1	.74	5.98	4.43
124	11.27	...	5	.45	1	2	.18	6.22	.56	15	11.10	...	...	.....	...	...	.....	.48	.35
1,164	105.76	...	...	.....	...	...	.....	33.12	3.01	189	139.90	...	...	.....	...	...	.....	4.11	3.04
283	25.71	...	8	.73	...	...	.....	10.32	.94	89	65.88	...	...	.....	...	...	.....	3.07	2.27
42	3.82	...	...	.....	...	...	.....	1.39	.13	3	2.22	...	...	.....	...	...	.....	.11	.08
207	18.81	...	...	.....	...	...	.....	3.42	.31	7	5.18	...	...	.....	...	...	.....	.17	.12
11,282	1,025.08	...	97	8.81	22	30	2.73	433.11	39.35	2,006	1,484.83	...	6	4.44	4	7	5.18	50.28	43.88
1,809	164.36	...	15	1.36	27	27	2.45	54.69	4.97	312	230.94	...	1	.74	3	3	2.22	5.71	4.22
13,091	1,189.44	...	112	10.18	49	57	5.18	487.80	44.32	2,318	1,715.77	...	7	5.18	7	10	7.40	64.99	48.10

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[2] Number of discharges and deaths including those of cases invalided home and deducted from the United States.

TABLE No. 73.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with*
and China for

International classification.		Alaska.									
	Mean strength	1,197.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1	Typhoid fever										
4	Malaria	6	5.01							0.12	0.10
	Æstivo-autumnal fever										
	Malarial cachexia										
	Quartan malarial fever										
	Tertian malarial fever	6	5.01							.12	.10
	Undetermined malarial fever										
6	Measles	26	21.72				1	1	0.83	1.28	1.07
9	Diphtheria										
10	Influenza	7	5.85							.11	.09
14	Dysentery										
	Bacillary										
	Entamœbic										
	Unclassified										
18	Erysipelas	1	.83							.02	.02
19g	Mumps	8	6.68							.46	.38
28–34	Tuberculosis, all	5	4.18					1	.83	.46	.38
28	Tuberculosis of lungs	4	3.34					1	.83	.40	.34
30–34	Tuberculosis of other organs	1	.83							.05	.04
37–38	Venereal diseases, all	50	41.77		1	0.83				3.10	2.59
37	Syphilis	9	7.52		1	.83				1.16	.97
38a	Soft chancre	4	3.34							.31	.26
38b	Gonococcus infection	37	30.91							1.63	1.36
39–45	Cancer and other malignant tumors										
46	Benign tumors	2	1.67							.03	.02
47–48	Rheumatism, articular, all	8	6.68		1	.83				.22	.18
47	Acute articular rheumatism	7	5.85							.12	.10
48	Chronic articular rheumatism	1	.83		1	.83				.10	.08
50	Diabetes	1	.83		1	.83				.11	.09
56	Alcoholism and results	36	30.07		1	.83				.68	.57
59	Other chronic poisoning, including drug habit										
60	Encephalitis										
63	Other diseases of spinal cord										
66	Paralysis without specific cause										
67–68	Mental alienation	8	6.68		1	.83				.33	.27
69	Epilepsy										
73	Neuralgia and neuritis	6	5.01		1	.83				.28	.24
77	Pericarditis	1	.83							.03	.02
79	Organic heart disease	3	2.51							.12	.10
80	Angina pectoris										
81	Diseases of the arteries, atheroma, aneurism, etc										
83b	Hemorrhoids	5	4.18							.18	.15
83d	Varicose veins										
83e	Varicocele										
84	Diseases of the lymphatic system	1	.83							.05	.04
86	Diseases of the nasal fossae	7	5.85							.05	.04
87	Diseases of the larynx	7	5.85							.07	.06
88	Diseases of the thyroid body										
89–90	Bronchitis	17	14.20							.33	.28
91	Broncho-pneumonia									.07	.05
92	Pneumonia	2	1.67							.07	.06
93	Pleurisy	1	.83							.01	.01
96	Asthma	1	.83							.14	.12
98a	Haemoptysis										
99a	Diseases of the teeth and gums	10	8.35							.14	.12
99b	Other diseases of the mouth and annexa	1	.83							.005	.005
100	Diseases of the pharynx	34	28.40							.46	.38
103	Diseases of stomach (cancer excepted)	20	16.71							.27	.22
105	Diarrhea and enteritis	13	10.86				1	1	.83	.14	.12
107	Intestinal parasites	2	1.67							.02	.02
108	Appendicitis	8	6.68							.41	.34
109	Hernia	2	1.67							.03	.03
110a	Diseases of the anus and fæcal fistula										
110b	Other diseases of the intestines	13	10.86							.11	.10
113	Cirrhosis of liver						1	1	.83		

[1] Number of discharges or deaths which actually occurred.

ratios per 1,000 of mean strength, for enlisted American troops serving in Alaska, Hawaii, the year 1912.

Hawaii.										China.									
3,376.										1,097.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1	0.30	...	...	...	...	...	...	0.07	0.02	...	...	...	...	...	...	...	...	...	...
21	6.22	...	...	...	...	...	...	.49	.15	6	5.47	...	...	...	...	...	...	0.09	0.08
...	...	...	...	...	...	...	...	...	...	1	.91	...	...	...	...	...	...	.01	.01
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	.91	...	...	...	...	...	...	.03	.02
21	6.22	...	...	...	...	...	...	.49	.15	4	3.65	...	...	...	...	...	...	.05	.04
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	4	3.65	...	...	...	...	...	...	.22	.20
...	...	...	...	...	...	...	...	...	...	1	.91	...	...	...	...	...	...	.05	.04
130	38.51	...	...	...	...	...	...	2.10	.62	47	42.84	...	...	...	...	...	...	.59	.54
5	1.48	...	...	...	...	...	...	.28	.08	11	10.03	...	...	...	...	...	...	.48	.44
...	...	...	...	...	...	...	...	...	...	4	3.65	...	...	...	...	...	...	.12	.11
5	1.48	...	...	...	...	...	...	.28	.08	4	3.65	...	...	...	...	...	...	.30	.27
...	...	...	...	...	...	...	...	...	...	3	2.73	...	...	...	...	...	...	.06	.06
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	4.44	...	...	...	...	...	...	.80	.24	11	10.03	...	...	...	...	...	...	.54	.49
7	2.07	...	5	1.48	...	1	0.30	1.13	.33	...	...	...	...	...	...	...	...	...	...
5	1.48	...	4	1.18	...	1	.30	.42	.12	...	...	...	...	...	...	...	...	...	...
2	.59	...	1	.30	...	...	...	.71	.21	...	...	...	...	...	...	...	...	...	...
415	122.93	...	9	2.67	...	1	.30	29.34	8.69	223	203.28	...	...	...	1	1	0.91	14.87	13.55
138	40.88	...	4	1.18	...	1	.30	10.70	3.17	32	29.17	...	...	...	...	...	...	2.62	2.39
89	26.36	...	...	...	...	...	...	5.35	1.58	109	99.36	...	...	...	1	1	.91	7.94	7.24
188	55.69	...	5	1.48	...	...	...	13.28	3.93	82	74.75	...	...	...	...	...	...	4.31	3.93
1	.30	...	...	...	...	...	...	.04	.01	...	...	...	...	...	...	...	...	...	...
16	4.74	...	...	...	...	...	...	.70	.21	3	2.73	...	...	...	...	...	...	.06	.05
23	6.81	...	...	...	...	...	...	1.65	.49	8	7.29	...	...	...	1	1	.91	.73	.66
17	5.03	...	...	...	...	...	...	.93	.27	3	2.73	...	...	...	1	1	.91	.73	.66
6	1.78	...	...	...	...	...	...	.73	.22	5	4.56	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
52	15.40	...	...	...	...	...	...	.40	.12	25	22.79	...	...	...	...	...	...	.27	.25
5	1.48	...	...	...	...	...	...	.08	.02	...	...	...	...	...	...	...	...	...	...
1	.30	...	...	...	1	1	.30	.01	.002	...	...	...	...	...	...	...	...	...	...
1	.30	...	...	...	...	...	...	.10	.03	1	.91	...	1	0.91	...	...	...	.04	.03
1	.30	...	...	...	...	...	...	.13	.04	1	.91	...	...	...	...	...	...	.12	.11
17	5.04	...	10	2.96	...	...	...	1.34	.40	6	5.47	...	4	3.65	...	...	...	.47	.43
5	1.48	...	2	.59	...	...	...	.39	.11	1	.91	...	1	.91	...	...	...	.05	.04
10	2.96	...	2	.59	...	...	...	.79	.23	4	3.65	...	...	...	...	...	...	.03	.02
1	.30	...	...	...	...	...	...	.10	.03	...	...	...	...	...	...	...	...	...	...
11	3.26	...	5	1.48	...	...	...	.88	.26	1	.91	...	...	...	...	...	...	.01	.01
...	...	...	...	...	...	...	...	...	...	1	.91	...	...	...	1	1	0.91	.002	.002
...	...	...	...	...	...	...	...	...	...	1	.91	...	...	...	...	...	...	.04	.03
21	6.22	...	...	...	...	...	...	.65	.19	7	6.38	...	...	...	...	...	...	.15	.14
1	.30	...	...	...	...	...	...	.13	.04	...	...	...	...	...	...	...	...	...	...
15	4.44	...	2	.59	...	...	...	1.48	.44	3	2.73	...	...	...	...	...	...	.05	.04
34	10.07	...	...	...	...	...	...	1.15	.34	9	8.20	...	...	...	...	...	...	.36	.32
86	25.47	...	1	.30	...	...	...	1.90	.56	5	4.56	...	...	...	...	...	...	.02	.01
6	1.78	...	...	...	...	...	...	.09	.03	4	3.65	...	...	...	...	...	...	.04	.03
1	.30	...	...	...	...	...	...	.16	.05	...	...	...	...	...	...	...	...	...	...
76	22.51	...	1	.30	...	...	...	2.34	.60	18	16.41	...	...	...	...	...	...	.28	.26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	.59	...	...	...	...	...	...	.17	.05	11	10.03	...	...	...	...	...	...	.63	.57
10	2.96	...	...	...	...	...	...	.83	.25	1	.91	...	...	...	...	...	...	.13	.12
2	.59	...	...	...	...	...	...	.20	.06	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	2	1.82	...	...	...	...	...	...	.05	.04
105	31.10	...	...	...	...	...	...	2.31	.68	...	...	...	...	...	...	...	...	...	...
5	1.48	...	...	...	...	...	...	.11	.03	...	...	...	...	...	...	...	...	...	...
170	50.35	...	...	...	...	...	...	3.07	.91	35	31.91	...	...	...	...	...	...	.51	.46
42	12.44	...	...	...	...	...	...	1.50	.44	15	13.67	...	...	...	...	...	...	.13	.12
149	44.14	...	...	...	...	...	...	2.01	.60	37	33.73	...	...	...	...	...	...	.37	.34
4	1.18	...	...	...	...	...	...	.05	.01	5	4.56	...	...	...	...	...	...	.05	.05
26	7.70	...	...	...	...	...	...	2.20	.65	9	8.20	...	...	...	1	1	.91	.34	.31
5	1.48	...	...	...	...	...	...	.87	.26	3	2.73	...	...	...	...	...	...	.25	.23
4	1.48	...	...	...	...	...	...	.29	.09	7	6.38	...	...	...	...	...	...	.38	.35
64	18.96	...	...	...	...	...	...	1.60	.47	11	10.03	...	...	...	...	...	...	.13	.11
1	.30	...	...	...	...	...	...	.11	.03	...	...	...	...	...	...	...	...	...	...

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[2] Number of discharges or deaths including those of cases invalided home and deducted from the United States.

TABLE No. 73.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with* *and China for the*

International classification.	Mean strength	Alaska.									
		1,197.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
114	Biliary calculi	...	...	...	...	...	...	...	...	...	...
115	Other diseases of liver and gall bladder	2	1.67	...	...	...	...	...	...	0.07	0.06
120	Bright's disease	...	...	...	...	...	...	...	...	...	...
122	Other diseases of the kidney and annexa	...	...	...	...	...	...	...	...	...	...
124	Diseases of the bladder	1	.83	...	...	...	...	...	...	.02	.01
125	Diseases of the urethra, urinary abscess, etc	...	...	...	...	...	...	...	...	...	...
126	Diseases of the prostate	...	...	...	...	...	...	...	...	...	...
127	Diseases of the male genital organs (nonvenereal)	10	8.35	...	...	...	...	...	...	.32	.26
143	Furuncle and carbuncle	10	8.35	...	...	...	...	...	...	.25	.21
144	Acute abscess and cellulitis	11	9.19	...	...	...	...	...	...	.15	.12
146	Diseases of the bones	2	1.67	...	...	...	...	...	...	.12	.10
147	Diseases of the joints	6	5.01	...	...	...	...	...	...	.44	.37
150	Congenital malformations	6	5.01	...	...	...	...	...	...	.18	.15
189Aa	Febricula, simple continued, and other fevers of undetermined causation	3	2.51	...	...	...	...	...	...	.03	.03
189Ba	Under observation, undiagnosed and unknown	3	2.51	...	...	...	...	...	...	.03	.03
189Bb	Malingering	...	...	...	...	...	...	...	...	...	...
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[3]										
155–163	Suicides, all	...	...	...	...	...	1	1	0.83	...	...
164	Poisoning by food	3	2.51	...	...	...	...	...	...	...	...
165a	Venomous bites and stings	...	...	...	...	...	...	...	...	...	...
165b	Other poisoning (deleterious gases excepted)	...	...	...	...	...	...	...	...	...	...
167	Burns (conflagrations excepted)	3	2.51	...	...	...	...	...	...	...	...
168a	Suffocation, strangulation	...	...	...	...	...	1	1	.83	...	...
169	Drowing, accidental	...	...	...	...	...	...	...	...	...	...
170	Traumatism by firearms (other than specified)	2	1.67	...	...	...	1	1	.83	...	...
170a	Shot by sentry or guard	...	...	...	...	...	...	...	...	...	...
171	Traumatism by cutting or piercing instruments	28	23.39	...	...	...	...	...	...	...	...
172	Traumatism by fall	73	60.99	...	...	...	...	...	...	...	...
174	Traumatism by machines	5	4.18	...	...	...	...	...	...	...	...
175	Traumatism by other crushing	4	3.34	...	...	...	...	...	...	...	...
176	Injuries by animals	3	2.51	...	...	...	...	...	...	...	...
178	Effects of excessive cold	1	.83	...	...	...	...	...	...	...	...
179	Effects of heat	...	...	...	...	...	...	...	...	...	...
181	Effects of electricity	...	...	...	...	...	...	...	...	...	...
182–4	Homicides, all	...	...	...	...	...	...	...	...	...	...
186	Other external violence	64	53.47	...	...	...	...	...	...	...	...
155–186	Total external causes	186	155.39	...	...	...	3	3	2.51	6.32	5.28
	DISEASES AND INJURIES GROUPED.										
	General diseases	151	126.15	...	4	3.34	2	2	1.67	6.61	5.52
1–19	Epidemic diseases	49	40.94	...	...	...	1	1	.83	2.02	1.69
20–59	Other general diseases	102	85.21	...	4	3.34	1	1	.83	4.58	3.83
	Diseases of the nervous system and organs of special sense	26	21.72	...	2	1.67	...	...	...	.99	.83
60–74	Of the nervous system	19	15.87	...	2	1.67	...	...	...	.81	.68
75	Of the eye and its annexa	3	2.51	...	...	...	...	...	...	.09	.07
76	Of the ear and its annexa	4	3.34	...	...	...	...	...	...	.09	.08
77–85	Diseases of the circulatory system	10	8.35	...	...	...	...	...	...	.38	.31
86–98	Diseases of the respiratory system	35	29.24	...	...	...	...	...	...	.74	.62
99–118	Diseases of the digestive system	105	87.71	...	...	...	2	2	1.67	1.67	1.39
119–127	Diseases of the genito-urinary system	11	9.19	...	...	...	...	...	...	.33	.28
142–145	Diseases of the skin and cellular tissue	34	28.40	...	...	...	...	...	...	.95	.79
146–149	Diseases of the organs of locomotion	40	33.42	...	...	...	...	...	...	1.20	1.01
150	Malformations, etc	6	5.01	...	...	...	...	...	...	.18	.15
189	Ill-defined diseases	8	6.68	...	...	...	...	...	...	.07	.06
	Total for disease	426	355.89	...	6	5.01	3	4	3.34	13.11	10.96
155–186	External causes	186	155.39	...	...	...	3	3	2.51	6.32	5.28
	Total for disease and external causes	612	511.28	...	6	5.01	6	7	5.85	19.44	16.24

[1] Number of discharges or deaths which actually occurred.

[3] Noneffectiveness for individual external causes not tabulated.

ratios per 1,000 of mean strength, for enlisted American troops serving in Alaska, Hawaii, year 1912—Continued.

Hawaii.										China.									
3,376.										1,097.									
Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
2	0.59							0.22	0.06										
17	5.04							.71	.21	7	6.38							0.16	0.14
1	.30		1	0.30				.03	.01										
1	.30		1	.30				.02	.01	1	.91							.01	.01
10	2.96		5	1.48				1.08	.32	3	2.73							.06	.06
4	1.18							.07	.02	1	.91							.005	.005
1	.30							.08	.02										
13	3.85							.55	.16	10	9.12							.82	.75
199	58.94							3.64	1.08	17	15.50							.36	.32
98	29.03							2.76	.82	11	10.03							.39	.36
15	4.44		1	.30				1.03	.31	2	1.82							.07	.07
22	6.52							1.43	.42										
3	.89							.15	.04	2	1.82							.07	.06
8	2.37							.18	.05	2	1.82							.01	.01
7	2.07							.15	.04										
1	.30							.15	.05										
															1	1	0.91		
57	16.88				1	1	0.30			1	.91								
2	.59									1	.91								
1	.30														1	1	.91		
12	3.55									2	1.82								
					3	3	.89												
8	2.37		2	.59						1	.91								
1	.30																		
65	19.25				1	1	.30			10	9.12								
232	68.72		1	.30	1	1	.30			48	43.76								
7	2.07																		
7	2.07				3	3	.89								2	2	1.82		
95	28.14		1	.30															
51	9.18									4	3.65								
1	.30																		
1	.30				1	1	.30												
343	101.60		2	.59						44	40.11								
863	255.63		6	1.78	10	10	2.96	23.21	6.88	111	101.19				4	4	3.65	2.64	2.41
703	208.23		14	4.15		2	.59	37.22	11.02	356	324.52				2	2	1.82	18.20	16.59
184	54.50							3.88	1.15	97	88.42							2.28	2.07
519	153.72		14	4.15		2	.59	33.34	9.87	259	236.10				2	2	1.82	15.92	14.51
119	35.25		17	5.03	1	1	.30	6.52	1.94	23	20.97		6	5.47				.90	.82
64	18.96		15	4.44	1	1	.30	4.79	1.42	17	15.50		6	5.47				.80	.73
32	9.48							.81	.24	4	3.65							.08	.08
23	6.81		2	.59				.93	.28	2	1.82							.01	.01
98	29.03		8	2.37				5.17	1.53	22	20.05				1	1	.91	.60	.55
184	54.50		2	.59				5.80	1.72	41	37.37							1.14	1.04
594	175.95							15.06	4.46	129	117.59				1	1	.91	2.33	2.12
30	8.89		7	2.07				1.83	.54	15	13.67							.90	.82
443	131.22							10.38	3.07	46	41.93							1.22	1.11
104	30.81		7	2.07				6.88	2.04	18	16.41							.52	.48
3	.89							.15	.04	2	1.82							.07	.06
20	5.92							.70	.21	2	1.82							.01	.01
2,298	680.69		55	16.29	1	3	.89	89.69	26.57	654	596.18		6	5.47	4	4	3.65	25.89	23.60
863	255.63		6	1.78	10	10	2.96	23.21	6.88	111	101.19				4	4	3.65	2.64	2.41
3,161	936.32		61	18.07	11	13	3.85	112.90	33.44	765	697.86		6	5.47	8	8	7.29	2	

[2] Number of discharges or deaths including those of cases invalided home and deducted fro
States.

TABLE No. 74.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for enlisted American troops serving in Panama Canal Zone and on Army transports for the year 1912.*

International classification.		Panama Canal Zone.										Army transports.									
	Mean strength.	773.										1,093.									
		Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
	Causes of admission to sick report.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
1a	Paratyphoid fever									0.04	0.05										
4	Malaria	93	120.31							4.33	5.60	62	56.72							1.02	0.93
	Æstivo-autumnal fever	69	89.26							3.28	4.24	4	3.66							.17	.16
	Malarial cachexia											1	.91							.005	.005
	Quartan malarial fever	3	3.88							.13	.16	2	1.83							.04	.04
	Tertian malarial fever	21	27.17							.93	1.20	53	48.49							.78	.71
	Undetermined malarial fever											2	1.83							.02	.01
5b	Vaccinia											1	.91							.01	.01
6	Measles											18	16.47							.34	.31
10	Influenza	29	37.52							.93	1.20	36	32.94							.73	.67
14	Dysentery	5	6.47							.27	.35	3	2.74							.64	.59
	Bacillary	3	3.88							.12	.16										
	Entamœbic	2	2.59							.15	.19	3	2.74							.63	.58
	Unclassified																			.01	.01
19b	Dengue											5	4.57							.10	.09
19d	German measles											3	2.74							.06	.05
19g	Mumps	2	2.59							.07	.10	54	49.41							1.55	1.42
20	Purulent infection and septicæmia											1	.91				1	1	0.91	.01	.01
28–34	Tuberculosis, all	6	7.76		1	1.29				.70	.90	3	2.74				1			4.49	4.11
28	Tuberculosis of lungs	4	5.17		1	1.29				.46	.59	3	2.74				1			4.25	3.88
30–34	Tuberculosis of other organs	2	2.59							.24	.31									.25	.22
37–38	Venereal diseases, all	53	68.56		1	1.29				2.44	3.16	123	112.53							6.94	6.35
37	Syphilis	10	12.94		1	1.29				.76	.99	14	12.81							1.75	1.60
38a	Soft chancre	25	32.34							1.15	1.49	35	32.02							1.21	1.11
38b	Gonococcus infection	18	23.29							.53	.69	74	67.70							3.98	3.64
39–45	Cancer and other malignant tumors	1	1.29				1	1	1.29	.05	.07									.16	.14
46	Benign tumors	1	1.29							.01	.02	1	.91							.04	.04
47–48	Rheumatism, articular, all	13	16.82							.46	.59	7	6.40							.30	.28
47	Acute articular rheumatism	13	16.82							.46	.59	7	6.40							.14	.13

48	Chronic articular rheumatism																			.16	.15
50	Diabetes											1	.91							.12	.11
51	Exophthalmic goitre																			.08	.07
56	Alcoholism and results	5	6.47							.04	.05	7	6.40							.61	.64
59	Other chronic poisoning, including drug habit																			.17	.15
61a	Epidemic cerebrospinal meningitis											1	.91				1	1	.91	.01	.01
62	Locomotor ataxia																			.11	.10
63	Other diseases of spinal cord																			.09	.08
64	Cerebral hemorrhage, apoplexy																			.08	.07
66	Paralysis without specified cause																			.03	.03
67-68	Mental alienation	4	5.17	1	2	2.59				.50	.65	1	.91							3.89	3.56
69	Epilepsy				1	1.29				.08	.10	1	.91							.36	.33
73	Neuralgia and neuritis	10	12.94							.38	.49	4	3.66							.59	.54
75b	Trachoma																			.08	.07
79	Organic heart disease	2	2.59		1	1.29				.26	.33									.25	.23
80	Angina pectoris											1	.91							.005	.005
81	Diseases of the arteries, atheroma, aneurism, etc											1	.91							.04	.03
83b	Hemorrhoids	8	10.35							.40	.52	3	2.74							.05	.04
83d	Varicose veins											1	.91							.01	.01
83e	Varicocele																			.05	.04
84	Diseases of the lymphatic system	3	3.88							.17	.23	3	2.74							.13	.11
86	Diseases of the nasal fossæ	36	46.57							.26	.34	20	18.30							.19	.17
87	Diseases of the larynx											4	3.66							.08	.07
88	Diseases of the thyroid body																			.02	.01
89-90	Bronchitis	20	25.87							.28	.30	99	90.58							1.73	1.58
91	Broncho-pneumonia											3	2.74				1	1	.91	.14	.12
92	Pneumonia											6	5.49							.31	.28
93	Pleurisy	6	7.76							.57	.73	2	1.83							.14	.12
96	Asthma	2	2.59							.34	.44	3	2.74							.36	.33
99a	Diseases of the teeth and gums	4	5.17							.02	.02	4	3.66							.13	.12
99b	Other diseases of the mouth and annexa	1	1.29							.02	.02										
100	Diseases of the pharynx	52	67.27							1.45	1.87	50	45.75							.55	.50
102	Ulcer of stomach																			.02	.02
103	Other diseases of stomach (cancer excepted)	5	6.47							.07	.10	20	18.30							.31	.28
105	Diarrhea and enteritis	10	12.94							.09	.11	40	36.60							.67	.61
107	Intestinal parasites	2	2.59							.04	.06	3	2.74							.02	.02
108	Appendicitis	1	1.29							.05	.06	2	1.83							.30	.28
109	Hernia	2	2.59							.14	.18									.02	.02
110a	Diseases of the anus and fecal fistula	1	1.29							.08	.10	1	.91							.12	.11
110b	Other diseases of the intestines	11	14.28							.10	.13	54	49.41							.70	.64
113	Cirrhosis of liver																			.02	.02
115	Other diseases of liver and gall bladder	2	2.59							.43	.56	2	1.83							.17	.16
119	Acute nephritis											1	.91							.01	.01

[1] Number of discharges or deaths which actually occurred.
[2] Number of discharges or deaths including those of cases invalided home and deducted from the United States.

TABLE No. 74.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for enlisted American troops serving in Panama Canal Zone and on Army transports for the year 1912*—Continued.

International classification.		Panama Canal Zone.										Army transports.									
	Mean strength	773.										1,093.									
	Causes of admission to sick report.	Admissions.		Discharges.			Deaths.			Noneffective.		Admissions.		Discharges.			Deaths.			Noneffective.	
		Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.[1]	Number.[2]	Ratio.	Number.	Ratio.
120	Bright's disease	1	1.29							0.08	0.10									0.10	0.09
122	Other diseases of the kidney and annexa	1	.29							.04	.05									.07	.06
124	Diseases of the bladder	4	5.17		1	1.29				.19	.25	1	0.91							.37	.34
127	Diseases of the male genital organs (nonvenereal)	3	3.88		1	1.29				.09	.12	2	1.83							.09	.08
143	Furuncle and carbuncle	10	12.94							.10	.13	7	6.40							.11	.10
144	Acute abscess and cellulitis	2	2.59							.04	.05	10	9.15							.28	.25
146	Diseases of the bones	3	3.88		1	1.29				.20	.26	1	.91							.15	.14
147	Diseases of the joints	1	1.29							.29	.37	1	.91							.30	.27
150	Congenital malformations	1	1.29							.08	.10										
189Aa	Febricula, simple continued, and other fevers of undetermined causation	1	1.29							.003	.004	1	.91							.01	.01
189Ba	Under observation, undiagnosed and unknown	1	1.29							.04	.05						1	1	0.91	.07	.06
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[3]																				
155-163	Suicides, all						1	1	1.29								1	1	.91		
164	Poisoning by food											1	.91				1	1	.91		
165a	Venomous bites and stings	2	2.59																		
165b	Other poisoning (deleterious gases excepted)											1	.91								
169	Drowning, accidental						2	2	2.59								1	1	.91		
170	Traumatism by firearms (other than specified)	1	1.29																		
171	Traumatism by cutting or piercing instruments	19	24.58									1	.91								
172	Traumatism by fall	55	71.15									14	12.81								

178	Traumatism by other crushing	1	1.29				1	1	1.29			1	.91								
179	Injuries by animals	3	3.88																		
[illegible]	Effects of heat	2	2.59																		
[illegible]	Homicides, all	1	1.29				2	2	2.59												
185	Fractures, causes not specified	1	1.29																		
186	Other external violence	35	45.28									18	16.47								
155-186	Total external causes	120	155.24				6	6	7.76	2.68	3.44	46	42.09				3	3	2.74	2.93	2.69
	DISEASES AND INJURIES GROUPED.																				
	General diseases	209	270.38		3	4.00	1	1	1.29	8.74	12.09	330	301.92				2	1	.01	17.55	16.06
1-19	Epidemic diseases	129	166.88							5.04	7.30	187	171.09							4.51	4.19
20-59	Other general diseases	80	103.49		3	4.00	1	1	1.29	3.70	4.79	143	130.83				2	1	.01	13.04	11.93
	Diseases of the nervous system and organs of special sense	38	49.16	1	3	4.00				1.88	2.40	32	29.28				1	1	.01	6.88	5.70
60-74	(a) The nervous system	18	23.29	1	3	4.00				1.14	1.48	10	9.15				1	1	.01	5.88	4.66
75	(b) The eye and its annexa	10	12.94							.30	.34	9	8.23							.35	.33
76	(c) The ear and its annexa	10	12.94							.45	.58	13	11.89							.64	.59
77-85	Diseases of the circulatory system	14	18.11		1	1.33				.84	1.09	9	8.23							.62	.57
86-98	Diseases of the respiratory system	64	82.80							1.40	1.81	137	125.34				1	1	.01	2.96	2.70
99-118	Diseases of the digestive system	91	117.72							2.40	3.28	177	161.94							3.09	2.82
119-141	Diseases of the genitourinary system	9	11.64		2	2.67				.40	.59	4	3.66							.64	.50
142-145	Diseases of the skin and cellular tissue	46	59.51							1.10	1.48	29	26.53							.70	.64
146-149	Diseases of the organs of locomotion	22	28.46		3	4.00				1.24	1.61	9	8.23							.93	.55
150	Malformations, etc	1	1.29							.06	.10										
189	Ill-defined diseases	2	2.59							.04	.06	40	36.60				1	1	.01	.54	.40
	Total for disease	496	641.66	1	12	16.02	1	1	1.29	18.76	24.30	767	701.74				5	4	3.66	33.35	30.51
155-186	External causes	120	155.24				6	6	7.76	2.68	3.44	46	42.09				3	3	2.74	2.93	2.69
	Total for disease and external causes	616	796.90	1	12	16.02	7	7	9.06	21.44	27.74	813	743.83				8	7	6.40	36.28	33.20

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[1] Number of discharges or deaths which actually occurred.

[2] Number of discharges or deaths including those of cases invalided home and discharged from the United States.

[3] Noneffectiveness for individual external causes not tabulated.

TABLE No 75.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for Porto Rican native troops and Philippine Scouts, enlisted men, for the year 1912.*

International classification.		Porto Rican native troops.								Philippine Scouts.							
	Mean strength.	588.								S. G. O. 5407.				A. G. O. 5493.			
	Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
1	Typhoid fever									3	0.56			1	0.18	0.54	0.10
4	Malaria	31	52.72					0.48	0.50	1,308	241.91			3	.55	22.67	4.19
	Æstivo-autumnal fever	1	1.70					.02	.02	252	46.61			2	.36	5.69	1.05
	Malarial cachexia									1	.18					.04	.01
	Quartan malarial fever									4	.74					.05	.01
	Tertian malarial fever	29	49.32					.45	.47	1,026	189.76			1	.18	16.40	3.03
	Undetermined malarial fever	1	1.70					.01	.01	25	4.62					.49	.09
5	Smallpox and varioloid	1	1.70					.05	.05	2	.37					.07	.01
5b	Vaccinia	5	8.50					.19	.20	4	.74					.03	.01
6	Measles									17	3.14					.81	.15
10	Influenza	8	13.60					.05	.05	2	.37					.09	.02
14	Dysentery	20	34.01					.60	.64	38	7.03					2.06	.38
	Bacillary	6	10.20					.33	.35	8	1.48					.33	.06
	Entamebic	14	23.81					.27	.29	24	4.44					1.55	.29
	Unclassified									6	1.11					.17	.03
18	Erysipelas									2	.37	1	0.18			.72	.13
19b	Dengue									125	23.12					1.78	.33
19d	German measles	1	1.70					.05	.05								
19g	Mumps	11	18.71					.35	.37	16	2.96					.78	.14
20	Purulent infection and septicemia									1	.18			1	.18	.01	.002
25	Mycosis									1	.18					.05	.01
27	Beriberi									2	.37					.27	.05
28–34	Tuberculosis, all	2	3.40					.22	.23	32	5.92	23	4.19	4	.73	4.92	.91
28	Tuberculosis of lungs	1	1.70					.09	.10	26	4.81	22	4.01			3.73	.69
29	Miliary tuberculosis, acute	1	1.70					.13	.14								
30–34	Tuberculosis of other organs									6	1.11	1	.18	4	.73	1.18	.22
37–38	Venereal diseases, all	62	105.44	1	1.70			5.63	5.96	301	55.67	2	.36			20.26	3.75
37	Syphilis	10	17.01					1.07	1.13	28	5.18					2.75	.51
38a	Soft chancre	34	57.82					3.18	3.36	48	8.88					3.20	.59
38b	Gonococcus infection	18	30.61	1	1.70			1.38	1.46	225	41.61	2	.36			14.81	2.65
39–45	Cancer and other malignant tumors									3	.56	1	.18	1	.18	.62	.12
46	Benign tumors	1	1.70					.01	.01	7	1.29					.23	.04
47–48	Rheumatism, articular all	7	11.90					.39	.41	26	4.81					1.45	.2

47	Acute articular rheumatism	6	10.20	......	......	......	......	.37	.39	24	4.44	......	......	......	......	1.02	.19
48	Chronic articular rheumatism	1	1.70	......	......	......	......	.02	.02	2	.37	......	......	......	......	.42	.08
56	Alcoholism and results	1	1.70	......	......	......	......	.02	.02	2	.37	......	......	......	......	.01	.003
63	Other diseases of spinal cord	......	......	......	......	......	......	......	......	1	.18	......	......	......	......	.21	.04
64	Cerebral hemorrhage, apoplexy	......	......	......	......	......	......	......	......	1	.18	......	......	1	.18	.01	.001
66	Paralysis without specified cause	......	......	......	......	......	......	......	......	2	.37	......	......	......	......	.31	.06
67–68	Mental alienation	1	1.70	1	1.70	......	......	.07	.08	5	.92	5	.91	......	......	1.13	.21
69	Epilepsy	......	......	......	......	......	......	......	......	2	.37	......	......	......	......	.05	.01
73	Neuralgia and neuritis	3	5.10	......	......	......	......	.02	.02	6	1.11	1	.18	......	......	.25	.05
79	Organic heart disease	......	......	......	......	......	......	......	......	3	.56	......	......	......	......	.18	.03
82	Embolism and thrombosis	......	......	......	......	......	......	......	......	1	.18	......	......	......	......	.09	.02
83b	Hemorrhoids	3	5.10	......	......	......	......	.09	.09	2	.37	......	......	......	......	.03	.01
83d	Varicose veins	......	......	......	......	......	......	......	......	1	.18	......	......	......	......	.06	.01
84	Diseases of the lymphatic system	34	57.82	......	......	......	......	.80	.85	30	5.55	......	......	......	......	1.53	.28
86	Diseases of the nasal fossæ	19	32.31	......	......	......	......	.20	.21	21	3.88	......	......	......	......	.34	.06
87	Diseases of the larynx	1	1.70	......	......	......	......	.01	.01	6	1.11	......	......	......	......	.20	.04
89–90	Bronchitis	6	10.20	......	......	......	......	.08	.08	153	28.30	......	......	......	......	4.12	.76
91	Broncho-pneumonia	......	......	......	......	......	......	......	......	4	.74	......	......	......	......	.26	.05
92	Pneumonia	1	1.70	......	......	......	......	.04	.05	10	1.85	......	......	2	.36	.48	.09
93	Pleurisy	......	......	......	......	......	......	......	......	3	.56	......	......	......	......	.38	.07
94	Pulmonary congestion and pulmonary apoplexy	......	......	......	......	......	......	......	......	1	.18	......	......	......	......	.01	.002
96	Asthma	4	6.80	......	......	......	......	.03	.03	2	.37	......	......	......	......	.01	.003
98a	Hemoptysis	......	......	......	......	......	......	......	......	2	.37	......	......	......	......	.08	.01
99a	Diseases of the teeth and gums	6	10.20	......	......	......	......	.06	.07	45	8.32	1	.18	......	......	.86	.16
99b	Other diseases of the mouth and annexa	1	1.70	......	......	......	......	.01	.01	1	.18	......	......	......	......	.003	.001
100	Diseases of the pharynx	11	18.71	......	......	......	......	.11	.11	29	5.36	......	......	......	......	.44	.08
103	Other diseases of stomach (cancer excepted)	2	3.40	......	......	......	......	.01	.01	52	9.62	......	......	......	......	.96	.18
105	Diarrhea and enteritis	66	112.24	......	......	......	......	.73	.77	102	18.86	......	......	......	......	1.43	.26
107	Intestinal parasites	41	69.73	......	......	......	......	.71	.75	35	6.47	......	......	1	.18	.76	.14
108	Appendicitis	1	1.70	......	......	......	......	.04	.04	9	1.66	......	......	......	......	1.10	.20
109	Hernia	1	1.70	......	......	......	......	.12	.13	2	.37	......	......	......	......	.14	.03
110a	Diseases of the anus and fecal fistula	1	1.70	......	......	......	......	.01	.01	3	.56	1	.18	......	......	.54	.10
110b	Other diseases of the intestines	12	20.41	......	......	......	......	.12	.13	273	50.49	......	......	......	......	3.51	.65
115	Other diseases of liver and gall bladder	1	1.70	......	......	......	......	.05	.06	6	1.11	......	......	1	.18	.17	.03
120	Bright's disease	......	......	......	......	......	......	......	......	2	.37	......	......	1	.18	.19	.03
122	Other diseases of the kidney and annexa	1	1.70	......	......	......	......	.01	.01	......	......	......	......	......	......	......	......
124	Diseases of the bladder	1	1.70	......	......	......	......	.02	.02	1	.18	......	......	......	......	.01	.002
125	Diseases of the urethra, urinary abscess, etc	1	1.70	......	......	......	......	.05	.05	1	.18	......	......	......	......	.08	.02
126	Diseases of the prostate	1	1.70	......	......	......	......	.01	.01	......	......	......	......	......	......	......	......
127	Diseases of the male genital organs (nonvenereal)	26	44.22	......	......	......	......	.65	.69	15	2.77	......	......	......	......	.55	.10
143	Furuncle and carbuncle	39	66.33	......	......	......	......	.46	.48	113	20.90	......	......	......	......	2.58	.48
144	Acute abscess and cellulitis	36	61.22	......	......	......	......	.86	.91	90	16.64	......	......	......	......	2.78	.51
146	Diseases of the bones	......	......	......	......	......	......	......	......	5	.92	......	......	......	......	.49	.09
147	Diseases of the joints	2	3.40	......	......	......	......	.26	.27	2	.37	......	......	......	......	.14	.03
150	Congenital malformations	6	10.20	......	......	......	......	.21	.22	3	.56	......	......	......	......	.08	.02

TABLE No. 75.—*Admissions to sick report, discharges, deaths, and noneffectiveness, with ratios per 1,000 of mean strength, for Porto Rican native troops and Philippine scouts, enlisted men, for the year 1912*—Continued.

International classification.		Porto Rican native troops.								Philippine Scouts.							
	Mean strength........	588.								S. G. O. 5407.				A. G. O. 5493.			
	Causes of admission to sick report.	Admissions.		Discharges.		Deaths.		Noneffective.		Admissions.		Discharges.		Deaths.		Noneffective.	
		Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.	Number.	Ratio.
189Aa	Febricula, simple continued, and other fevers of undetermined causation........	8	13.61	....	....	....	....	0.51	0.54	56	10.36	....	....	....	....	1.04	0.19
189Ba	Under observation, undiagnosed and unknown........	78	132.65	....	....	....	....	.003	.003	4	.74	....	....	1	0.18	.45	.08
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[1]																
155–163	Suicides, all........	....	....	....	....	....	....	....	....	....	....	....	....	1	.18	....	....
164	Poisoning by food........	2	3.40	....	....	1	1.70	....	....	5	.92	....	....	....	....	....	....
165a	Venomous bites and stings........	....	....	....	....	....	....	....	....	8	1.48	....	....	....	....	....	....
165b	Other poisoning (deleterious gases excepted)........	....	....	....	....	....	....	....	....	16	2.96	....	....	1	.18	....	....
167	Burns (conflagrations excepted)........	....	....	....	....	....	....	....	....	4	.74	....	....	....	....	....	....
168a	Suffocation, strangulation........	....	....	....	....	....	....	....	....	1	.18	....	....	....	....	....	....
170	Traumatism by firearms (other than specified)........	1	1.70	....	....	....	....	....	....	11	2.03	....	....	....	....	....	....
170a	Shot by sentry or guard........	....	....	....	....	....	....	....	....	1	.18	....	....	....	....	....	....
171	Traumatism by cutting or piercing instruments........	7	11.90	....	....	....	....	....	....	36	6.66	....	....	....	....	....	....
172	Traumatism by fall........	25	42.51	....	....	1	1.70	....	....	77	14.24	....	....	....	....	....	....
175	Traumatism by other crushing........	....	....	....	....	....	....	....	....	3	.56	1	0.18	....	....	....	....
176	Injuries by animals........	....	....	....	....	....	....	....	....	3	.56	....	....	....	....	....	....
179	Effects of heat........	2	3.40	....	....	....	....	....	....	6	1.11	....	....	....	....	....	....
182–4	Homicides, all........	....	....	....	....	....	....	....	....	....	....	....	....	1	.18	....	....
186	Other external violence........	25	42.51	....	....	....	....	....	....	146	27.00	....	....	1	.18	....	....
	Killed or wounded in action:																
	By bullet........	....	....	....	....	....	....	....	....	4	.74	3	.55	2	.36	....	....
	By bolo, kris, etc........	....	....	....	....	....	....	....	....	7	1.29	3	.55	1	.18	....	....
	By other weapon........	....	....	....	....	....	....	....	....	2	.37	....	....	....	....	....	....
155–186	Total external causes........	62	105.44	....	....	2	3.40	1.09	1.15	330	61.04	7	1.27	7	1.27	12.97	2.40

TABLE No. 76.—*Admissions to sick report, discharges, deaths, and noneffectiveness, ex-*
at home stations, placed in comparison with the same

International classification.	Causes of admissions to sick report.	United States (at home).				Alaska.				Philippine Islands.			
		Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
1	Typhoid fever	0.26		0.03	0.05					0.40			0.09
1a	Paratyphoid fever	.05			.01					.08			
4	Malaria	14.22			.30	5.01			0.10	171.00		0.32	3.51
	Estivo-autumnal fever	.96			.03					46.29		.32	1.23
	Malarial cachexia	.14			.01					.40			.04
	Quartan malarial fever	.12								.89			.02
	Tertian malarial fever	12.30			.24	5.01			.10	118.15			2.12
	Undetermined malarial fever	.70			.01					5.26			.10
5	Smallpox and varioloid	.10			.01								
5b	Vaccinia	12.85			.13					1.05			.02
6	Measles	7.30	0.10	.20	.43	21.72		0.83	1.07	2.75			.24
7	Scarlet fever	.24			.02								
9	Diphtheria	1.30			.07					.16			.02
10	Influenza	16.65			.26	5.85			.09	3.32			.06
13	Cholera nostras	.05											
14	Dysentery	1.78	.10	.02	.15					16.91	0.08	.08	1.12
	Bacillary	.29	.02		.02					.89			.04
	Entamebic	.93	.08	.02	.10					13.51	.08	.08	1.00
	Unclassified	.57			.02					2.51			.09
18	Erysipelas	.41			.02	.83			.02	.16			
19b	Dengue	.21								108.93			1.90
19d	German measles	3.87			.09					.08			
19e	Hemoglobinuric fever												.01
19g	Mumps	19.17	.02		.82	6.68			.38	9.79			.76
20	Purulent infection and septicemia	.07	.02	.03	.02					.08		.08	
25	Mycoses	.05								.49			.03
28–34	Tuberculosis, all	3.25	1.67	.27	1.65	4.18		.83	.38	5.02	1.46	.57	.53
28	Tuberculosis of lungs	2.88	1.57	.22	1.57	3.34		.83	.34	4.61	1.38	.49	.45
29	Miliary tuberculosis, acute	.05		.05									
30–34	Tuberculosis of other organs	.33	.10		.08	.83			.04	.40	.08	.08	.08
36	Scoliosis (rickets)	.03	.03										
37–38	Venereal diseases, all	115 74	1.26	.05	5.96	41.77	0.83		2.59	249.17	1.13	.24	16.55
37	Syphilis	25.58	.62	.03	1.70	7.52	.83		.97	42.73	.40	.24	3.08
38a	Soft chancre	20.09	.03		1.01	3.34			.26	67.33			4.35
38b	Gonococcus infection	70.07	.60	.02	3.26	30.91			1.36	139.11	.73		9.13
39–45	Cancer and other malignant tumors	.22	.03	.10	.05					.16		.08	.03
46	Benign tumors	1.52	.02		.05	1.67			.02	.97			.04
47–48	Rheumatism, articular, all	9.78	.28	.05	.66	6.68	.83		.18	6.47	.08	.08	.44
47	Acute articular rheumatism	8.31	.02	.05	.45	5.85			.10	4.86		.08	.23
48	Chronic articular rheumatism	1.47	.27		.21	.83	.83		.08	1.62	.08		.11
50	Diabetes	.17	.07	.02	.02	.83	.83		.09	.16	.08		.01
51	Exophthalmic goitre	.21	.10		.03					.16	.08		.03
56	Alcoholism and results	16.67	.37	.15	.29	30.07	.83		.57	21.20	.24	.24	.35
57–58	Chronic occupational poisoning	.02											
59	Other chronic poisoning, including drug habit	.43	.08	.02	.03					.16	.16		.02
60	Encephalitis	.02		.02									
61	Simple meningitis	.03		.03									
61a	Epidemic cerebrospinal meningitis	.17		.07	.01					.16		.08	.02
62	Locomotor ataxia	.07	.05		.03					.16	.08		.03
63	Other diseases of spinal cord	.17	.10		.04								
64	Cerebral hemorrhage, apoplexy	.09	.02	.05	.02						.08		
66	Paralysis without specified cause	.34	.03		.04					.16	.08		.02
67–68	Mental alienation	3.26	2.78	.03	.85	6.68	.83		.27	3.56	2.19		.34
69	Epilepsy	1.30	.42		.13					.65	.24		.04
73	Neuralgia and neuritis	5.21	.27		.26	5.01	.83		.24	8.25	.16		.36
75a	Follicular conjuctivitis	.15											
75b	Trachoma	.39	.05		.02					.16			
77	Pericarditis	.05				.83			.02	.24			.05
78	Acute endocarditis	.10	.02		.01								.01
79	Organic heart disease	1.64	.74	.20	.23	2.51			.10	1.05	.08	.16	.06
80	Angina pectoris	.26	.02	.02	.02					.08		.08	
81	Diseases of the arteries, atheroma, aneurism, etc	.22	.02	.07	.03					.24		.08	.02

pressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty data for those serving at distant stations for the year 1912.

Hawaii.				Canal Zone, Panama.				China.				Transports.				Total American Army.			
Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
0.30			0.02													0.27		0.03	0.06
							0.05									.05			.01
6.22			.15	131.21			5.60	5.47			0.06	51.72			0.93	40.00		.06	.85
				[illegible]			4.24	.91			.01	3.65			.16	6.97		.05	.26
												.91				.15			.02
				2.58			.16	[illegible]			.02	1.53			.04	.31			.01
6.22			.15	27.1[illegible]			1.20	1.[illegible]			.34	45.49			.71	28.17			.54
												1.83			.01	1.35			.02
																.06			.01
												.9[illegible]			.01	9.76			.10
								3.65			.20	16.47			.31	6.49	0.06	.16	.28
																.18			.01
								.91			.04					1.[illegible]			.06
38.51			.62	25.52			1.26	42.84			.54	22.94			.67	16.12			.26
																.04			
1.48			.08	6.47			.25	11.73			.44	2.74			.59	4.31	.09	.03	.31
				2.58			.16	[illegible]			[illegible]					.45	.0[illegible]		.02
1.48			.06	2.58			.19	1.82			.27	2.74			.56	3.00	.05	.03	.25
								2.73			.06				.01	.96			.03
																.34			.02
												4.57			.09	17.41			.30
												2.74			.05	2.94			.07
4.44			.24	2.58			.10	21.03			.40	46.4[illegible]			1.42	16.90	.0[illegible]		.77
												.9[illegible]		0.91	.01	.08	.01	.05	.02
																.11			.01
2.07	1.48	0.30	.23	7.76	1.29		.90					2.74			4.[illegible]	3.49	1.56	.3[illegible]	1.40
1.48	1.18	.30	.12	5.17	1.29		.50					2.74			3.66	3.05	1.46	.26	1.31
																.04		.04	
.59	.30		.21	2.58			.2[illegible]								.22	.27	.1[illegible]	.01	.09
																.03			
122.93	2.67	.30	6.09	66.56	1.29		3.[illegible]	58.[illegible]		1.82	[illegible]	22.53			6.2[illegible]	136.70	1.36	.10	7.78
40.88	1.18	.30	3.17	22.64	1.29		.99	25.[illegible]			1.39	22.8[illegible]			2.60	26.42	.60	.05	1.97
28.36			1.58	23.34			1.49	56.9[illegible]		.91	7.14	23.0[illegible]			1.1[illegible]	25.96	.03	.0[illegible]	1.64
55.08	1.48		3.93	22.29			.69	74.75			3.92	65.7[illegible]			2.64	79.22	.03	.0[illegible]	4.17
.30			.02	1.29		1.29	.07								.14	.22	.03	.10	.05
4.74			.2[illegible]	1.29			.02	2.73			.05	.91			.04	1.54	.0[illegible]		.05
6.81			.49	16.8[illegible]			.34	7.29		.91	.66	6.40			.28	9.11	.24	.06	.50
5.03			.27	16.82			.50	2.73		.91	.66	6.40			.23	7.03	.0[illegible]	.06	.40
1.78			.22					4.56							.15	1.45	.23		.19
												.91			.1[illegible]	.18	.05	.0[illegible]	.02
															.07	.18	.04		.03
15.40			.12	6.47			.05	22.79			.25	.40			.64	17.35	.23	.15	.30
																.0[illegible]			
1.48			.02												.15	.41	.09	.01	.08
.30		.30														.03		.03	
																.03		.03	
												.91		.91	.02	.17		.08	.01
															.10	.08	.0[illegible]		.03
.30			.02					.91	0.91		.03				.05	.15	.09		.03
															.07	.06	.03	.04	.02
.30			.04					.91			.1[illegible]				.03	.32	.04		.04
5.04	2.96		.40	5.17	2.59		.65	5.47	3.65		.43	.91			3.56	3.45	2.64	.08	[illegible]
1.48	.30		.1[illegible]		1.29		.10	.91	.91		.04	.91			.33	1.16	.40		[illegible]
2.96	.30		.23	12.94			.49	3.65			.02	3.66			.54	5.02	.26		[illegible]
																.11			
															.07	.22	.04		.0[illegible]
.30			.03													.10			.0[illegible]
																.08	.01		.0[illegible]
3.26	1.48		.26	2.59	1.29		.33	.91			.01				.23	1.61	.64	.18	.2[illegible]
								.91		.91		.91				.23	.01	.04	.0[illegible]
								.91			.03	.91			.03	.22	.02	.06	.03

TABLE No. 76.—*Admissions to sick report, discharges, deaths, and noneffectiveness, ex-*
at home stations, placed in comparison with the same data

International classification.	Causes of admissions to sick report.	United States (at home).				Alaska.				Philippine Islands.			
		Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
82	Embolism and thrombosis	0.02		0.02									
83b	Hemorrhoids	5.64	0.02		0.17	4.18			0.15	8.74			0.29
83d	Varicose veins	.86			.06					.57			.04
83e	Varicocele	1.90	.02		.11					4.21			.24
84	Diseases of the lymphatic system	4.66			.24	.83			.04	10.68			.69
86	Diseases of the nasal fossæ	13.26	.03		.17	5.85			.04	11.09			.22
87	Diseases of the larynx	3.58			.06	5.85			.06	.89			.01
88	Diseases of the thyroid body	.14	.02	.02	.01					.24	0.08		.01
89–90	Bronchitis	38.24	.12		.80	14.20			.28	21.77			.58
91	Broncho-pneumonia	.48		.07	.05				.05	.24			.06
92	Pneumonia	2.38	.03	.20	.18	1.67			.06	1.46			.17
93	Pleurisy	3.41	.03		.24	.83			.01	2.67			.22
94	Pulmonary congestion and pulmonary apoplexy	.39		.03									
96	Asthma	.79	.03		.06	.83			.12	1.05	.32		.04
98a	Hemoptysis	.10											
98b	Hay fever	.07											
99a	Diseases of the teeth and gums	5.22			.08	8.35			.12	11.09			.24
99b	Other diseases of the mouth and annexa	.74	.02		.03	.83				.89			.02
100	Diseases of the pharynx	74.45			1.05	28.40			.38	34.47			.60
102	Ulcer of the stomach	.10	.05	.02	.02					.24			.03
103	Other diseases of stomach (cancer excepted)	11.79	.02		.20	16.71			.22	20.23		0.08	.46
105	Diarrhea and enteritis	23.66	.03	.02	.32	10.86		0.83	.12	60.69	.08		1.05
107	Intestinal parasites	2.38			.05	1.67			.02	1.94			.04
108	Appendicitis	6.85		.07	.52	6.68			.34	5.66		.24	.59
109	Hernia	4.20	.37		.45	1.67			.03	3.40			.42
110a	Diseases of the anus and fecal fistula	.63	.03		.05					1.54			.12
110b	Other diseases of the intestines	22.00	.03	.02	.29	10.86			.10	49.85			.65
113	Cirrhosis of liver	.07		.02	.01			.83					
114	Biliary calculi	.24		.02	.02					.24			.01
115	Other diseases of liver and gall bladder	3.10			.17	1.67			.06	5.10		.32	.34
117	Simple peritonitis	.05	.02	.03									
119	Acute nephritis	.46		.10	.03								
120	Bright's disease	.62	.23	.10	.12					.73	.08	.16	.06
122	Other diseases of the kidney and annexa	.34	.05		.03					.32			.01
124	Diseases of the bladder	2.79	.35		.17	.83			.01	2.27	.24		.10
125	Diseases of the urethra, urinary abscess, etc	1.37			.02					1.62			.04
126	Diseases of the prostate	.03								.16			.02
127	Diseases of the male genital organs (nonvenereal)	5.89	.02		.17	8.35			.26	5.58			.30
143	Furuncle and carbuncle	13.96			.24	8.35			.21	35.61			.81
144	Acute abscess and cellulitis	10.23			.26	9.19			.12	26.30			.74
146	Diseases of the bones	1.87	.12		.16	1.67			.10	2.02			.17
147	Diseases of the joints	3.22	.20		.23	5.01			.37	3.32	.24		.21
150	Congenital malformations	3.94	.02		.12	5.01			.15	3.64			.12
189Aa	Febricula, simple continued, and other fevers of undetermined causation	1.94			.04	2.51			.03	15.46			.23
189Ba	Under observation, undiagnosed and unknown	2.14	.02	.02	.15	2.51			.03	1.13			.03
189Bb	Malingering	.51			.02					.24			.02
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES.[1]												
155–163	Suicides, all	.31		.79				.83		.16		.24	
164	Poisoning by food	1.01				2.51				13.92			
165a	Venomous bites and stings	.91								2.19			
165b	Other poisoning (deleterious gases excepted)	.43		.10						.16			
166	Conflagration	.03											

[1] **Noneffectiveness for individual external causes not tabulated.**

pressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty for those serving at distant stations for the year 1912—Continued.

Hawaii.				Canal Zone, Panama.				China.				Transports.				Total American Army.			
Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
																0.01		0.01	
6.22			0.19	10.35			0.52	6.38			0.14	2.74			0.04	6.15	0.01		0.19
.30			.04									.91			.01	.75			.06
4.44	0.30		.44					2.73			.04				.04	2.31	.04		.14
10.67			.34	3.88			.23	8.20			.32	2.74			.11	5.80			.31
25.67	.30		.56	46.57			.34	4.56			.01	18.30			.17	13.61	.04		.19
1.78			.08					3.65			.03	3.66			.07	3.08			.08
.30			.05												.01	.15	.03	.01	.01
22.51	.30		.69	25.87			.30	16.41			.26	90.58			1.58	34.89	.10		.78
												2.74		0.91	.12	.43		.06	.06
.30			.05					10.03			.57	5.49			.28	2.27	.03	.16	.18
2.96			.25	7.76			.73	.91			.12	1.83			.12	3.22	.03		.33
																.29		.03	
.59			.06	2.59			.44					2.74			.33	.86	.06		.10
								1.82			.04					.10			
																.06			
31.18			.68	5.17			.02					3.66			.12	7.29			.13
1.48			.03	1.29			.02									.78	.01		[illegible]
58.35			.91	67.27			1.87	31.91			.46	45.75			.50	68.[illegible]			[illegible]
															.09	.11	[illegible]	[illegible]	[illegible]
12.46			.44	6.47			.10	13.67			.12	18.30			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
44.14			.60	12.94			.11	23.73			.34	36.60			.01	[illegible]	[illegible]	[illegible]	[illegible]
1.18			.01	2.59			.06	4.56			.06	2.74			[illegible]	[illegible]			[illegible]
7.70			.65	1.29			.06	8.20		0.91	.31	1.83			[illegible]	[illegible]		[illegible]	[illegible]
1.48			.26	2.59			.18	2.73			.23				[illegible]	[illegible]	[illegible]		[illegible]
1.18			.09	1.29			.10	6.38			.35	.91			.11	[illegible]	[illegible]		[illegible]
18.96			.47	14.23			.13	10.03			.11	49.41			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.30			.03												[illegible]	[illegible]		[illegible]	[illegible]
.59			.06													[illegible]		[illegible]	[illegible]
5.04			.21	2.59			.56	6.38			.14	1.83			[illegible]	[illegible]		[illegible]	[illegible]
																[illegible]	[illegible]	[illegible]	
												.91			[illegible]	[illegible]		[illegible]	[illegible]
.30	.30		.01	1.29			.10								[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.30	.30		.01	1.29			.06	.91			.01				[illegible]	[illegible]	[illegible]		[illegible]
2.96	1.48		.32	5.17	1.29		.25	2.73			.05	.91			[illegible]	[illegible]	[illegible]		[illegible]
1.18			.02					.91								[illegible]			[illegible]
.30			.02													[illegible]			
3.85			.16	2.88	1.29		.12	9.12			.75	1.[illegible]			[illegible]	[illegible]	[illegible]		[illegible]
58.94			1.08	12.94			.13	15.50			.32	6.40			[illegible]	[illegible]			[illegible]
20.03			.82	2.59			.05	10.03			.36	9.15			[illegible]	[illegible]			[illegible]
4.44	.30		.31	3.88	1.29		.25	1.82			.07	.91			[illegible]	[illegible]	[illegible]		[illegible]
6.52			.42	1.29			.27					.91			[illegible]	[illegible]	[illegible]		[illegible]
.89			.04	1.29			.10	1.82			.06					[illegible]	[illegible]		[illegible]
2.37			.06	1.29				1.82			.01	.91			[illegible]	[illegible]			[illegible]
2.07			.04	1.29			.06							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.30			.05													[illegible]			[illegible]
						1.29				.91				[illegible]		[illegible]		[illegible]	
16.88		0.30						.91				.91		[illegible]		[illegible]		[illegible]	
.59				2.59				.91								[illegible]			
.30										.01		.91				[illegible]		[illegible]	

TABLE No. 76.—*Admissions to sick report, discharges, deaths, and noneffectiveness, ex-*
at home stations, placed in comparison with the same data

International classification.	Causes of admissions to sick report.	United States (at home).				Alaska.				Philippine Islands.			
		Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES—contd.												
167	Burns (conflagrations excepted)	2.76	....	....	....	2.51	....	....	....	1.45	....	....	....
168	Absorption of deleterious gases	.05	....	0.03	....	....	....	....	....	.08	....	....	....
168a	Suffocation, strangulation	....	....	....	....	....	....	0.83	....	....	....	....	....
169	Drowning, accidental	....	....	.40	....	....	....	....	....	....	....	1.05	....
170	Traumatism by firearms (other than specified)	2.07	0.20	.12	....	1.67	....	.83	....	2.02	0.80	.24	....
170a	Shot by sentry or guard	.10	....	.05	....	....	....	....	....	.08	....	.08	....
171	Traumatism by cutting or piercing instruments	10.57	.10	.02	....	23.39	....	....	....	16.26	.16	....	....
172	Traumatism by fall	47.47	.28	.17	....	60.99	....	....	....	47.10	.49	.24	....
174	Traumatism by machines	1.25	.05	.02	....	4.18	....	....	....	.65	....	....	....
175	Traumatism by other crushing	2.00	.08	.30	....	3.34	....	....	....	2.10	.24	.16	....
176	Injuries by animals	14.24	.08	....	....	2.51	....	....	....	17.48	....	....	....
178	Effects of excessive cold	.75	.03	....	....	.83	....	....	....	....	....	....	....
179	Effects of heat	1.44	....	.02	....	....	....	....	....	4.21	....	....	....
180	Effects of lightning	.09	....	.03	....	....	....	....	....	....	....	....	....
181	Effects of electricity	....	....	....	....	....	....	....	....	....	....	....	....
182–4	Homicides, all	.10	....	.22	....	....	....	....	....	....	....	.32	....
185	Fractures, causes not specified	.12	....	.02	....	....	....	....	....	....	....	....	....
186	Other external violence	56.05	.44	....	....	53.47	....	....	....	63.69	.32	.08	....
	Killed or wounded in action	....	....	....	....	....	....	....	....	.16	....	....	....
	By bullet	....	....	....	....	....	....	....	....	.08	....	....	....
	By bolo, kris, etc	....	....	....	....	....	....	....	....	.08	....	....	....
155–186	Total for external causes	141.76	1.29	2.28	4.58	155.39	....	2.51	5.28	171.64	1.29	2.43	4.89
	DISEASES AND INJURIES GROUPED.												
	General diseases	233.65	4.22	.99	11.28	126.15	3.34	1.67	5.52	603.54	3.40	1.62	25.75
1–19	Epidemic diseases	85.04	.22	.25	2.45	40.94	....	.83	1.69	318.93	.08	.40	7.77
20–59	Other general diseases	148.61	4.00	.74	8.83	85.21	3.34	.83	3.83	284.62	3.32	1.38	17.98
	Diseases of the nervous system and organs of special sense	27.51	4.64	.22	2.14	21.72	1.67	....	.83	36.74	5.24	.08	1.63
60–74	Of the nervous system	13.74	3.97	.20	1.55	15.87	1.67	....	.68	16.75	2.91	.08	1.02
75	Of the eye and its annexa	9.01	.25	....	.33	2.51	....	....	.07	10.44	....	....	.31
76	Of the ear and its annexa	4.76	.42	.02	.25	3.34	....	....	.08	9.55	.32	....	.31
77–85	Diseases of the circulatory system	16.89	.94	.30	.96	8.35	....	....	.31	28.16	.16	.32	1.50
86–98	Diseases of the respiratory system	63.37	.28	.33	1.60	29.24	....	....	.62	39.49	.40	....	1.32
99–118	Diseases of the digestive system	155.58	.59	.20	3.26	87.71	....	1.67	1.39	195.60	.08	.65	4.60
119–127	Diseases of the genito-urinary system	12.03	.65	.20	.56	9.19	....	....	.28	11.25	.40	.16	.54
142–145	Diseases of the skin and cellular tissue	53.17	.18	.02	1.28	28.40	....	....	.79	109.49	....	....	3.01
146–149	Diseases of the organs of locomotion	25.75	1.66	....	1.15	33.42	....	....	1.01	30.10	.65	....	1.08
150	Malformations, etc	3.94	.02	....	.12	5.01	....	....	.15	3.64	....	....	.12
189	Ill-defined diseases	5.05	.02	.02	.22	6.68	....	....	.06	17.32	....	....	.29
	Total for disease	596.94	13.19	2.28	22.57	355.89	5.01	3.34	10.96	1,075.34	8.34	2.99	39.85
155–186	External causes	141.76	1.29	2.28	4.58	155.39	....	2.51	5.28	171.64	1.29	2.43	4.89
	Total for disease and external causes	738.70	14.48	4.55	27.15	511.28	5.01	5.85	16.24	1,246.99	9.63	5.42	44.74

NOTE.—In Table No. 76 noneffective rates of 0.005 or less are omitted.

pressed in ratios per 1,000 of mean strength, for American troops (enlisted men) on duty for those serving at distant stations for the year 1912—Continued.

Hawaii.				Canal Zone, Panama.				China.				Transports.				Total American Army.			
Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.	Admissions.	Discharges.	Deaths.	Noneffective.
3.55	.....	.....	.....	.....	.....	.....	.....	1.82	.....	.....	.....	.....	..	.....	.....	2.50	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.04	.....	0.03	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.....	.....	.01	.....
.....	.....	0.89	.....	.....	.....	2.59	.....	.....	.....	.....	.....	.....	..	0.91	.....	.....	.....	.54	.....
2.37	0.59	.....	.....	1.29	.....	.....	.....	.91	.....	.....	.....	.....	..	.....	.....	2.02	0.19	.14	.....
.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.10	.....	.05	.....
19.25	.....	.30	.....	24.58	.....	.....	.....	9.12	.....	.....	.....	0.91	..	.....	.....	12.02	.10	.03	.....
68.72	.30	.30	.....	71.15	.....	.....	.....	43.76	.....	.....	.....	12.81	..	.....	.....	48.23	.30	.18	.....
2.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	1.19	.04	.01	.....
2.07	.....	.89	.....	1.29	.....	1.29	.....	.....	.....	1.82	.....	.91	..	.....	.....	1.99	.10	.33	.....
28.14	.30	.....	.....	3.88	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	14.67	.08	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.57	.03	.....	.....
9.18	.....	.....	.....	2.59	.....	.....	.....	3.65	.....	.....	.....	.....	..	.....	.....	2.21	.....	.01	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.06	.....	.03	.....
.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.01	.....	.....	.....
.30	.....	.30	.....	1.29	.....	2.59	.....	.....	.....	.....	.....	.....	..	.....	.....	.10	.....	.25	.....
.....	.....	.....	.....	1.29	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.10	.....	.01	.....
101.60	.59	.....	.....	45.28	.....	.....	.....	40.11	.....	.....	.....	16.47	..	.....	.....	58.30	.40	.01	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.03	.01	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.01	.01	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	.....	.....	.01	.....	.....	.....
255.63	1.78	2.96	6.88	155.24	.....	7.76	3.44	101.19	.....	3.65	2.41	32.94	..	2.74	2.68	149.64	1.24	2.41	4.67
208.23	4.15	.59	11.02	270.38	3.88	1.29	12.08	324.52	.....	1.82	16.59	301.92	..	.91	16.06	291.90	3.96	1.12	13.61
54.50	.....	.....	1.15	166.88	.....	.....	7.29	88.42	.....	.....	2.07	171.09	..	.....	4.12	122.03	.18	.26	3.29
153.72	4.15	.59	9.87	103.49	3.88	1.29	4.79	236.10	.....	1.82	14.51	130.83	..	.91	11.93	169.86	3.78	.85	10.33
35.25	5.03	.30	1.94	49.16	3.88	.....	2.40	20.97	5.47	.....	.82	29.28	..	.91	5.79	29.36	4.33	.20	2.06
18.96	4.44	.30	1.42	23.29	3.88	.....	1.48	15.50	5.47	.....	.73	9.15	..	.91	4.88	14.53	3.76	.19	1.48
9.48	.....	.....	.24	12.94	.....	.....	.34	3.65	.....	.....	.08	8.23	..	.....	.32	9.11	.19	.....	.32
6.81	.59	.....	.28	12.94	.....	.....	.58	1.82	.....	.....	.01	11.89	..	.....	.59	5.72	.39	.01	.26
29.03	2.37	.....	1.53	18.11	1.29	.....	1.09	20.05	.....	.91	.55	8.23	..	.....	.57	19.00	.84	.29	1.05
54.50	.59	.....	1.72	82.80	.....	.....	1.81	37.37	.....	.....	1.04	125.34	..	.91	2.70	59.38	.30	.26	15.57
175.95	.....	.....	4.46	117.72	.....	.....	3.22	117.59	.....	.91	2.12	161.94	..	.....	2.82	160.92	.45	.29	3.47
8.89	2.07	.....	.54	11.64	2.59	.....	.52	13.67	.....	.....	.82	3.66	..	.....	.59	11.63	.67	.18	.55
131.22	.....	.....	3.07	59.51	.....	.....	1.42	41.93	.....	.....	1.11	26.53	..	.....	.64	64.59	.14	.01	1.61
30.81	2.07	.....	2.04	28.46	3.88	.....	1.61	16.41	.....	.....	.48	8.23	..	.....	.85	26.42	1.47	.....	1.17
.89	.....	.....	.04	1.29	.....	.....	.10	1.82	.....	.....	.06	.....	..	.....	.....	3.67	.01	.....	.12
5.92	.....	.....	.21	2.59	.....	.....	.06	1.82	.....	.....	.01	36.60	..	.91	.49	7.42	.01	.08	.23
680.69	16.29	.89	26.57	641.66	15.52	1.29	24.30	596.18	5.47	3.65	23.60	701.74	..	3.66	30.51	674.29	12.18	2.37	25.43
255.63	1.78	2.96	6.88	155.24	.....	7.76	3.44	101.19	.....	3.65	2.41	32.94	..	2.74	2.68	149.64	1.24	2.41	4.67
936.32	18.07	3.85	33.44	796.90	15.52	9.06	27.74	697.36	5.47	7.29	26.01	734.67	..	6.40	33.20	823.94	13.43	4.79	30.10

TABLE No. 77.—*Total movement of sick for United States Army, enlisted men at home, compared with that of foreign armies.*

	United States (continental), American troops, enlisted men, 1912.		British (United Kingdom), year 1911.		Prussian, year 1910.		Bavarian, year 1910.		Austro-Hungarian, year 1910.		Russian, year 1910.	
Mean strength	58,374.		109,399.		551,237.		66,745.				1,227,100.	
	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.	Total.	Hospital.
Admitted to sick report, total	43,121	37,093	87,822	37,886	317,778	137,315	29,641	15,191			542,410	510,523
Ratio per 1,000 of mean strength	738.70	635.44	802.77	346.3	576.5	249.1	444.1	227.6	823.2	376.5	442.0	416.0
Disposed of all causes	43,529				316,669		29,696				541,814	
Ratio per 1,000 of mean strength	745.69				574.47		444.92				442.0	
Died of all causes	272		305		954		116				5,070	
Ratio per 1,000 of mean strength	4.55		2.47		1.73		1.74		2.84		4.13	
Ratio per 1,000 of all disposed of	6.25				3.01		3.91		2.23		8.1	
Died of disease	136		235		549		71				4,415	
Ratio per 1,000 of mean strength	2.28		1.90		1.00		1.06		1.83		3.60	
Died of injury	136		70		405		45				655	
Ratio per 1,000 of mean strength	2.28		.57		.73		.67		1.01		.53	
Died when on sick report or present with command	168		271		619		80					
Ratio per 1,000 of mean strength	2.88		2.19		1.12		1.20					
Ratio per 1,000 of all disposed of	3.86				1.95		2.69					
Died when not on sick report or absent from command	104		34		335		36					
Accidental deaths	[1]89		39		167		21				387	
Suicides	47		31		238		24				268	
Returned to duty	40,753				296,579		27,458				496 870	
Ratio per 1,000 of all disposed of	936.23				936.6		924.64		868.2		917.1	
Otherwise disposed of	2,608				19,559		2,169				40,529	
Ratio per 1,000 of all disposed of	59.91				61.8		73.00		129.5		74.8	
Total days lost on account of sickness—all causes	579,892	534,113	1,084,324	722,000	4,898,184		534,419					
Constantly noneffective on account of sickness—all causes	1,584.40	1,459.32	2,970.75	2,197.26	13,419.68		1,464.16					
Ratio per 1,000 of mean strength	27.15	25.00	27.16	20.08	24.34		21.94					
Average days of treatment:												
For each soldier of mean strength	9.93	9.15		8.86	8.9		8.0		12.9		10.5	
For each case of sickness	13.45	14.40		21.18	15.0		17.5		15.1		23.8	
Discharges for disability—all causes	865		1,209		22,087		3,509				40,529	
Ratio per 1,000 of mean strength	14.48		9.78		40.1		52.6				33.0	
Total losses per 1,000 of mean strength	19.03		12.25		41.83		54.34				37.13	

	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Mean strength	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
	Total	[illegible]	Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Admitted to sick report, total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio per 1,000 of mean strength	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disposed of all causes	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Ratio per 1,000 of mean strength	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Died of all causes	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Ratio per 1,000 of mean strength	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Ratio per 1,000 of all disposed of	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Died of disease	[illegible]		[illegible]		[illegible]		[illegible]			
Ratio per 1,000 of mean strength	[illegible]		[illegible]		[illegible]		[illegible]			
Died of injury	[illegible]		[illegible]		[illegible]		[illegible]			
Ratio per 1,000 of mean strength	[illegible]		[illegible]		[illegible]		[illegible]			
Died when on sick report or present with command	[illegible]		[illegible]		[illegible]		[illegible]			
Ratio per 1,000 of mean strength	[illegible]				[illegible]		[illegible]			
Ratio per 1,000 of all disposed of	[illegible]				[illegible]		[illegible]			
Died when not on sick report or absent from command	[illegible]				[illegible]		[illegible]			
Accidental deaths	[illegible]		[illegible]		[illegible]		[illegible]			
Suicides	[illegible]		[illegible]		[illegible]		[illegible]			
Returned to duty	[illegible]		[illegible]				[illegible]		[illegible]	
Ratio per 1,000 of all disposed of	[illegible]		[illegible]				[illegible]		[illegible]	
Otherwise disposed of	[illegible]		[illegible]				[illegible]		[illegible]	
Ratio per 1,000 of all disposed of	[illegible]		[illegible]				[illegible]		[illegible]	
Total days lost on account of sickness	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
Constantly noneffective on account of sickness	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
Ratio per 1,000 of mean strength	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
Average days of treatment	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible] of mean strength	[illegible]				[illegible]		[illegible]			
[illegible] case of sickness	[illegible]				[illegible]		[illegible]			
Discharged for disability, [illegible]	[illegible]				[illegible]		[illegible]			
Ratio per 1,000 of mean strength	[illegible]				[illegible]		[illegible]			
Total [illegible] per 1,000 of mean strength	[illegible]				[illegible]		[illegible]			

TABLE No. 78.—*A comparison of the admission and death rates of the United States Army enlisted men at home for certain special diseases with those of foreign armies.*

Diseases.	Admission rates per 1,000 of mean strength.										Death rate per 1,000 of mean strength.									
	United States, continental (excluding Alaska), year 1912.	British, year 1911.	Prussian, year 1910.	Bavarian, year 1910.	Austro-Hungarian, year 1910.	Russian, year 1910.	Spanish, year 1910.	Dutch, year 1910.	French, year 1910.	Japanese, year 1909.	United States, continental (excluding Alaska), year 1912.	British, year 1911.	Prussian, year 1910.	Bavarian, year 1910.	Austro-Hungarian, year 1910.	Russian, year 1910.	Spanish, year 1910.	Dutch, year 1910.	French, year 1910.	Japanese, year 1909.
1. Alkoholismus acutus, including delirium tremens	14.80	0.6	0.07	0.24	......	0.07	0.18	0.256	0.23	0.01	0.12	0.02	......	......	......	......	......	0.042	0.003	......
2. Appendicitis typhlitis, perityphlitis	6.85	(1)	4.9	4.1	......	2.35	.21	(1)	2.18	1.04	.07	(1)	0.07	0.12	......	0.10	0.01	(1)	.07	0.04
3. Bronchitis acuta	36.45	[2]10.8	37.7	35.4	91.1	23.1	35.87	54.6	85.01	43.97	......	.02	......	......	0.01	......	.09	......	.01	......
4. Cholera Asiatica	......	.2	......	......	.0	.44	......	......	......	.01	......	.09	......	......	.00	.14	......	......	......	.01
5. Cholera nostras	.05	......	......	......	.0	.02	......	......	.003	.01	......	......	......	......	.00	.002	......	......	.001	.01
6. Diphtheria et croup	1.30	.3	.80	.69	.2	.18	.01	.128	1.14	.02	......	.02	.01	......	......	.01	......	......	.02	.01
7. Dysenteria	1.78	3.2	.44	.37	.2	.67	.54	......	.59	.53	.02	.10	......	......	.02	.05	.008	......	.003	.08
8. Erysipelas	.41	.3	.82	.94	1.2	3.69	3.70	2.47	1.37	.10	......	.01	.01	......	.02	.09	.008	......	.01	.01
9. Febris intermittens (malaria)	12.42	35.8	.05	.06	2.8	28.8	13.93	2.00	.71	26.28	......	.04	......	......	......	.02	.04	......	......	.05
10. Febris recurrens	......	(1)	......	......	......	.06	.10	......	......	......	......	(1)	......	......	......	.002	......	......	......	......
11. Fractura ossium	12.32	(1)	7.3	5.3	2.6	1.8	1.40	(1)	4.67	2.16	.22	(1)	.02	.04	.02	.02	.008	(1)	.12	.03
12. Gonorrhea	70.07	34.6	13.5	11.9	30.1	24.3	30.10	16.8	16.56	10.55	.02	......	......	......	.00	......	......	......	......	......
13. Hernia	4.20	3.1	2.7	2.3	6.0	2.4	2.58	4.1	9.08	.77	......	.00	......	......	......	.002	......	......	.007	.01
14. Influenza	16.65	5.8	12.2	16.8	3.1	33.5	41.18	22.00	8.60	2.92	......	......	......	.01	.01	.07	.23	......	.08	......
15. Insolatio (Hitzschlag coup de chaleur)	.07	1.5	.16	.21	.2	.03	.14	.042	.16	2.09	.02	.11	.01	......	.00	......	......	......	......	.09
16. Luxationes articulorum	3.17	(1)	1.3	1.1	.8	.82	.76	(1)	1.63	.76	......	(1)	......	......	......	......	......	(1)	......	......
17. Meningitis cerebro spinalis epidemica	.17	.1	.04	.27	......	.005	.15	......	.54	.14	.07	.06	.02	.10	......	.003	.11	......	.12	.07
18. Morbilli	7.30	1.7	.36	.66	.6	.38	5.62	.085	14.55	1.30	.20	......	......	......	.01	.01	.14	......	.10	......
19. Parotitis epidemica	19.17	.5	.81	2.0	2.1	4.1	6.15	.256	15.68	.33	......	......	......	......	.00	.001	.008	......	.007	......
20. Pleuritis	3.41	(1)	3.3	2.5	5.4	10.1	2.37	(1)	9.28	15.30	......	(1)	.04	.03	.04	.17	.06	(1)	.10	.14
21. Pneumonia crouposa sive lobaris	2.38	[2]2.7	3.8	4.4	3.0	4.59	2.86	3.67	2.65	5.18	.20	[2].30	.15	.15	.13	.33	.23	.29	.19	.30
22. Rheumatismus articulorum	9.78	4.9	6.3	8.0	12.9	6.26	23.94	10.8	19.98	6.39	.05	.00	.02	.04	.02	.01	.03	.042	.01	.01
23. Scarlatina	.24	1.0	.74	1.0	.3	.15	.20	.61	3.68	......	......	.01	.02	.03	.02	.01	.008	......	.07	......
24. Scorbutus	......	.0	.01	......	.1	.66	......	......	......	......	......	......	......	......	......	.01	......	......	......	......

25. Syphilis	25.58	29.3	5.3	4.2	16.7	15.1	11.91	4.14	5.28	6.77	.03	.03	......	......	.01	.01	.01	......	.003	......
26. Trachoma	.39	.0	.24	......	4.1	5.3	.02	......	.04	4.70	......	......	......	......	......	......	......	......	......	......
27. Tuberculosis pulmonum	2.88	1.3	1.4	1.4	1.4	2.09	5.81	4.82	4.73	3.85	.22	.15	.09	.13	.41	.55	.54	.34	.33	.16
28. Tuberculosis ceterorum organorum	.37	.4	.46	.24	3.1	1.42	.35	1.1	2.02	1.26	.05	.07	.08	.03	.20	.14	.04	.042	.33	.33
29. Typhus abdominalis	.26	1.7	.19	.13	1.3	5.2	7.03	.51	2.38	5.47	.03	.20	.06	.03	.20	.75	1.20	.128	.31	.55
30. Typhus exanthematicus	......	......	......	......	.0	.17	......	......	......	.01	......	......	......	......	......	.02	......	......	......	......
31. Ulcus molle	20.09	(1)	1.8	1.2	8.4	8.0	31.27	(1)	1.49	7.69	......	(1)	......	......		......	......	(1)	......	......
32. Variola	.10	.0	......	......	.0	.18	.46	......	.02	.01	......	......	......	......	......	.02	.01	......	......	......
33. Morbi auris	4.76	7.8	11.1	11.9	17.8	16.3	9.10	14.48	8.77	8.33	.02	.03	.02	.03	.02	.20	.03	......	.02	.01
34. Morbi cordis	2.67	3.9	3.1	2.7	6.0	4.1	5.34	3.1	3.27	1.24	.20	.17	.02	.01	.07	.05	.10	.128	.04	.05
35. Morbi cutis	22.81	27.1	19.0	7.4	179.1	39.32	44.09	147.4	16.03	152.65	......	.00	.01	......	.02	.05	.03	......	.001	.02
36. Morbi mentis	3.26	.8	1.5	2.0	1.5	.57	.71	1.96	.59	.34	.03	.01	......	......	.01	.01	......	......	.01	......
37. Morbi oculi	9.01	6.1	11.6	6.7	33.3	16.4	15.25	21.7	5.92	27.01	......	......	......	......	......	......	......	......	......	......
38. Morbi systemat urin et sexual (excluding veneris et syphilis)	12.03	9.3	6.4	5.7	14.3	8.2	9.34	10.16	9.43	8.62	.20	.11	.05	.03	.06	.09	.02	.085	.07	.05

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[1] Disease not reported in table.

[2] All; acute not tabulated separately.

[3] All pneumonia; croupous not tabulated separately.

TABLE No. 79.—*Showing the most important diseases, by divisions, in the United States (continental, excluding Alaska), year 1912—enlisted men.*

Diseases.	Admissions, absolute numbers.									Admissions per 1,000 of mean strength, proportionate numbers.								
	Eastern division.	Central division.	Western division.	Recruit depots.	Independent stations.	General hospitals.	Total.	Races.		Eastern division.	Central division.	Western division.	Recruit depots.	Independent stations.	General hospitals.	Total.	Races.	
								White.	Colored.								White.	Colored.
1. Alkoholismus acutus, including delirium tremens	396	217	145	51	36	19	864	849	15	19.47	11.29	12.18	10.35	24.71	36.89	14.80	15.19	6.03
2. Appendicitis, typhlitis, perityphlitis	116	124	70	45	12	33	400	386	14	5.70	6.45	5.88	9.13	8.24	64.08	6.85	6.91	5.63
3. Bronchitis acuta	566	542	454	510	39	17	2,128	2,050	78	27.82	28.19	38.14	103.47	26.77	33.01	36.45	36.68	31.35
4. Cholera Asiatica	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
5. Cholera nostras	3	......	......	......	......	......	3	3	......	.15	......	......	......	......	......	.05	.05	......
6. Diphtheria	5	65	4	2	......	......	76	76	......	.25	3.38	.34	.41	......	......	1.30	1.36	......
7. Dysenteria	24	57	16	3	......	4	104	99	5	1.18	2.96	1.34	.61	......	7.77	1.78	1.77	2.01
8. Erysipelas	2	7	7	7	1	......	24	23	1	.10	.36	.59	1.42	.69	......	.41	.41	.40
9. Febris intermittens (malaria)[1]	310	144	92	142	31	6	725	720	5	15.24	7.49	7.73	28.81	21.28	11.65	12.42	12.89	2.01
10. Febris recurrens	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
11. Fractura ossium	219	258	151	67	18	6	719	694	25	10.77	13.42	12.69	13.59	12.35	11.65	12.32	12.42	10.05
12. Gonorrhea	1,354	1,371	808	487	36	34	4,090	3,905	185	66.56	71.31	67.88	98.80	24.71	66.02	70.07	69.87	74.36
13. Hernia	64	66	41	60	10	4	245	237	8	3.15	3.43	3.44	12.17	6.86	7.77	4.20	4.24	3.22
14. Influenza	299	291	250	35	88	9	972	956	16	14.70	15.16	21.00	7.10	60.40	17.48	16.65	17.10	6.43
15. Insolatio (Hitzschlag coup de chaleur)	1	2	......	......	1	......	4	4	......	.05	.10	......	......	.69	......	.07	.07	......
16. Luxationes articulorum	68	60	36	18	3	......	185	175	10	3.34	3.12	3.02	3.65	2.06	......	3.17	3.13	4.02
17. Meningitis cerebro-spinalis epidemica	1	4	1	6	......	......	12	12	......	.05	.21	.08	1.22	......	......	.21	.21	......
18. Morbilli	88	42	51	244	1	......	426	422	4	4.33	2.18	4.28	49.50	.69	......	7.30	7.55	1.61
19. Parotitis epidemica	216	392	141	368	......	2	1,119	1,106	13	10.62	20.39	11.84	74.66	......	3.88	19.17	19.79	5.23
20. Pleuritis	56	76	33	28	......	6	199	189	10	2.75	3.95	2.77	5.68	......	11.65	3.41	3.38	4.02
21. Pneumonia crouposa sive lobaris	32	41	30	32	1	3	139	132	7	1.57	2.13	2.52	6.49	.69	5.83	2.38	2.36	2.81
22. Rheumatismus articulorum	130	191	138	86	11	15	571	545	26	6.39	9.93	11.59	17.45	7.55	29.13	9.78	9.75	10.45
23. Scarlatina	1	3	5	3	......	2	14	14	......	.05	.16	.42	.61	......	3.88	.24	.25	......
24. Scorbutus	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
25. Syphilis	653	392	237	155	22	34	1,493	1,444	49	32.10	20.39	19.91	31.45	15.10	66.02	25.58	25.84	19.69
26. Trachoma	1	5	......	17	......	......	23	23	......	.05	.26	......	3.45	......	......	.39	.41	......
27. Tuberculosis pulmonum [2]	38	44	48	33	1	4	168	164	4	1.87	2.29	4.03	6.70	.69	7.77	2.88	2.93	1.61
28. Tuberculosis ceterorum organorum	7	5	8	2	......	......	22	19	3	.34	.26	.67	.41	......	......	.38	.34	1.20
29. Typhus abdominalis	3	3	2	7	......	......	15	15	......	.15	.16	.17	1.42	......	......	.26	.27	......
30. Typhus exanthematicus	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
31. Ulcus molle	472	420	145	113	11	12	1,173	1,147	26	23.20	21.85	12.18	22.93	7.55	23.30	20.09	20.52	10.45
32. Variola	1	......	4	1	......	......	6	6	......	.05	......	.34	.20	......	......	.10	.11	......
33. Morbi auris	70	77	73	54	3	1	278	268	10	3.44	4.01	6.13	10.95	2.06	1.94	4.76	4.80	4.02
34. Morbi cordis[3]	28	28	16	31	3	3	109	106	3	1.38	1.46	1.34	6.29	2.06	5.83	1.87	1.89	1.21
35. Morbi cutis [4]	468	457	372	337	39	13	1,686	1,645	41	23.01	23.77	31.25	68.37	26.77	25.24	28.88	29.44	16.48

86. Morbi mentis	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
87. Morbi oculi	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
88. Morbi systematis ossium et [illegible] (excluding venerie et syphilis)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

¹ Malarial fever, intermittent only. ² Includes tuberculosis of the intestine. ³ Includes pericarditis and endocarditis. ⁴ Diseases of the skin proper only.

TABLE No. [illegible]. Comparative figures, Army, by years, [illegible]

[illegible]

Army.	Mean strength.	Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Total days [illegible]				Constantly noneffective [illegible]			
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.		From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
										Total.	Per [illegible]	Total.	Per [illegible]	Total.	Per [illegible]	Total.	Per [illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE No. 80.—*Comparative figures, Army, by years, 1908–1912*—Continued.

PROPORTIONATE NUMBERS (ENLISTED MEN).

Army.	Mean strength.	Ratios per 1,000 of mean strength.												Average number of days lost.			
		Admissions to sick report.		Discharges on certificate of disability.		Deaths.		Total losses.		Noneffective from sickness.				From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.	
		From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.	Excluding injuries, venereal diseases, vaccinia, and alcoholism.	From all causes.		Excluding injuries, venereal diseases, vaccinia, and alcoholism.					
										Total.	In hospital.	Total.	In hospital.	For each soldier.	For each case.	For each soldier.	For each case.
1912.....	78,267	823.94	510.46	13.43	10.60	4.79	2.12	18.22	12.72	30.10	27.58	17.25	16.04	11.02	13.37	6.31	12.37
1911.....	72,748	935.74	541.10	13.85	10.94	4.77	2.48	18.62	13.42	33.28	30.07	17.54	16.06	12.15	12.98	6.40	11.83
1910.....	71,534	949.76	555.74	14.02	10.81	4.46	2.30	18.48	13.11	35.93	32.57	18.53	16.96	13.12	13.81	6.77	12.17
1909.....	74,319	1,062.99	629.84	16.84	12.18	4.91	2.93	21.75	15.11	41.48	36.66	22.01	19.69	15.14	14.24	8.03	12.75
1908.....	65,406	1,188.03	704.98	18.48	13.75	6.13	3.21	24.61	16.96	42.68	37.12	23.68	21.00	15.62	13.15	8.67	12.29

TABLE No. 81.—*Ratios per 1,000 of mean strength for "total admissions" and for "Case admissions" for enlisted American troops in the Army (as a whole), in the United States (continental) excluding Alaska, and in the Philippine Islands, for the years 1904 to 1911, for disease, external causes, and all causes.*

[Ratio per 1,000 of mean strength.]

Year.		Army.		United States (continental) excluding Alaska.		Philippine Islands.	
		Total admissions.	Case admissions.	Total admissions.	Case admissions.	Total admissions.	Case admissions.
1904....	Disease	1,114	1,002	1,049	951	1,473	1,293
	External causes	241	228	257	242	215	204
	All causes	1,355	1,230	1,306	1,193	1,688	1,497
1905....	Disease	1,058	975	998	921	1,387	1,260
	External causes	238	226	252	239	213	207
	All causes	1,296	1,201	1,250	1,160	1,600	1,467
1906....	Disease	1,053	987	944	879	1,494	1,409
	External causes	224	216	236	226	206	202
	All causes	1,277	1,203	1,180	1,105	1,700	1,611
1907....	Disease	1,005	926	956	885	1,260	1,153
	External causes	213	206	216	208	223	216
	All causes	1,218	1,132	1,172	1,093	1,483	1,369
1908....	Disease	963	891	922	860	1,208	1,097
	External causes	225	217	227	219	232	222
	All causes	1,188	1,108	1,149	1,079	1,440	1,319
1909....	Disease	866	791	822	750	1,156	1,062
	External causes	197	190	202	195	192	185
	All causes	1,063	981	1,024	945	1,348	1,247
1910....	Disease	766	707	715	662	1,048	956
	External causes	184	178	184	178	195	188
	All causes	950	885	899	840	1,243	1,144
1911....	Disease	770	718	726	680	1,028	947
	External causes	166	161	162	157	190	185
	All causes	936	879	888	837	1,218	1,132

INTERNATIONAL MILITARY MEDICAL STATISTICS FOR THE YEAR 1912.

The following tables are those agreed upon at the International Commission for the Unification of the Medical Statistics of Armies, held at Budapest in 1894, at Madrid in 1903, and modified by the last meeting held at Berlin in 1907. They are calculated for the United States Army proper (white and colored) and include enlisted men only. Dispositions include cases remaining from last year. Deaths include suicides and accidents. Days lost include those lost this year by cases remaining from last year.

Table I shows in absolute numbers, by divisions, the mean strength of the command, the admissions to quarters, to hospital, and total admissions; the disposition of the sick, total, and the number returned to duty, died. and otherwise disposed of, and the total number of days sickness.

Table II gives the same data in ratios per 1,000, and also shows the days lost per soldier and per admission.

Table III shows, by arms of service, the mean strength, the total admissions, and those to hospital only, the total dispositions, and the number of those returned to duty, and the number that died.

Table IV gives the same data as Table III by months.

Table V shows for each of the larger garrisons the mean strength, admissions to hospital, total admissions, and the deaths.

Table VI shows for each of the 38 diseases or disease groups agreed upon by the International Commission, the number remaining under treatment at the commencement and close of the current year, the admissions and dispositions for the year, the total sick days, and the average number of days per case.

Table VII shows the admissions, by arms of service, for the diseases and disease groups referred to in Table VI.

Table VIII shows the same data as Table VII by months.

Table IX shows deaths by rank, by length of service, and by age.

Table X shows the same data as Table IX for discharges for physical disability.

INTERNATIONAL TABLE I.—*Movement of sick by Army corps (divisions)—Absolute numbers (enlisted men).*

Divisions.	Mean strength.	Admitted sick.			Sick disposed of.				Total days sick.
		Total.	To hospital.	To quarters.	Returned to duty (recovered).	Died.	Otherwise disposed of.	Total.	
United States (excluding Alaska):									
Eastern Division	20,343	13,441	11,585	1,856	12,326	70	776	13,172	124,065
Central Division	19,226	13,009	11,309	1,700	12,453	82	392	12,927	167,865
Western Division	11,904	8,148	6,698	1,450	6,068	44	239	6,351	71,484
Recruit depots	4,929	7,013	6,500	513	6,597	32	657	7,286	77,683
Independent stations	1,457	1,057	580	477	1,014	8	18	1,040	9,206
General hospitals	515	453	421	32	2,295	36	526	2,857	129,569
Total	58,374	43,121	37,093	6,028	40,753	272	2,608	43,633	579,892
Alaska	1,197	612	488	124	606	7	12	625	7,114
Canal Zone, Panama	773	616	321	295	560	7	40	607	7,848
Hawaii	3,376	3,161	2,719	442	3,003	13	116	3,132	41,323
China	1,097	765	510	255	711	8	25	744	10,442
Philippines Division	12,357	15,409	13,746	1,663	14,954	67	543	15,564	202,321
Army transports	1,093	803	776	27	705	7	18	730	13,281
Army	78,267	64,487	55,653	8,834	61,292	381	3,362	65,035	862,221

INTERNATIONAL TABLE II.—*Movement of sick by Army corps' divisions.—Proportionate numbers; enlisted men.*

Divisions.	In 1,000 of mean strength.			In 1,000 [illegible]				
	Total admissions.	Admissions to hospital.	Deaths.	Remained in [illegible]	Died.	[illegible]	[illegible]	[illegible]
United States excluding Alaska:								
Eastern Division	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Central Division	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Western Division	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Recruit depots	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Independent stations	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
General hospitals	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Alaska	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Canal Zone, Panama	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hawaii	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
China	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Philippines Division	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Army transports	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Army	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

INTERNATIONAL TABLE [illegible].—*Movements of sick by arms of service. Army, enlisted men.*

Arms of service.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Infantry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cavalry	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Coast artillery	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Field artillery	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Engineers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ordnance	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Signal Corps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hospital Corps	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Others	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

INTERNATIONAL TABLE IV.—*Movement of sick by months (enlisted men).*

AMERICAN TROOPS AT HOME.

Month	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.	Fit for duty (recovered).	Deaths.
January....	54,703	3,960	3,582	3,910	3,729	13	72.39	65.48	0.24	953.71	3.33
February...	55,512	3,918	3,537	3,841	3,681	22	70.58	63.72	.39	958.25	5.73
March......	56,176	4,303	3,832	4,350	4,152	31	76.60	68.21	.54	954.49	7.13
April.......	57,667	3,898	3,497	3,930	3,751	21	67.60	60.64	.35	954.45	5.34
May........	58,317	3,667	3,281	3,811	3,642	24	62.88	56.26	.40	953.97	6.11
June.......	57,018	3,303	2,829	3,393	3,186	29	57.93	49.62	.48	938.70	8.55
July........	60,014	3,395	2,717	3,338	3,081	17	56.57	45.27	.28	923.01	5.09
August.....	59,825	3,390	2,668	3,436	3,164	31	56.67	44.60	.50	920.84	9.02
September .	60,524	3,216	2,680	3,311	3,037	24	53.14	44.28	.39	917.25	7.25
October....	60,077	3,301	2,688	3,425	3,058	18	54.95	44.74	.29	892.85	5.26
November..	60,326	3,203	2,753	3,306	2,947	17	53.10	45.64	.28	891.41	5.14
December..	60,333	3,567	3,029	3,584	3,326	.25	59.12	50.20	.42	928.01	6.98
Total.	58,374	43,121	37,093	43,633	40,753	272	738.70	635.44	4.55	933.99	6.23

AMERICAN TROOPS IN THE PHILIPPINE ISLANDS.

Month	Absolute numbers.						Proportionate numbers.				
	Mean strength.	Sick admissions.		Sick disposed of.			Per 1,000 of mean strength.			Per 1,000 sick disposed of.	
		Total.	To hospital.	Total.	Fit for duty (recovered).	Deaths.	Total sick admissions.	Admissions to hospital.	Deaths.	Fit for duty (recovered).	Deaths.
January....	14,315	1,432	1,303	1,422	1,380	9	100.03	91.02	0.67	970.46	6.33
February...	15,180	1,287	1,033	1,298	1,265	6	84.78	68.05	.40	974.57	4.62
March......	13,718	1,378	1,195	1,362	1,327	5	100.45	87.11	.36	974.30	3.67
April.......	13,573	1,325	1,203	1,337	1,292	10	97.62	88.63	.74	966.34	7.48
May........	12,075	1,375	1,271	1,343	1,313	4	113.87	105.26	.33	977.66	2.98
June.......	11,040	1,374	1,273	1,396	1,368	5	124.46	115.31	.45	980.64	3.58
July........	11,275	1,535	1,398	1,532	1,482	4	136.14	123.99	.35	967.36	2.61
August.....	11,478	1,396	1,227	1,370	1,296	4	121.62	106.90	.35	945.99	2.92
September .	11,585	1,309	1,145	1,329	1,272	2	112.99	98.83	.17	957.11	1.50
October....	11,321	1,126	1,002	1,193	1,104	5	99.46	88.51	.44	925.40	4.19
November..	11,174	945	840	1,024	969	6	84.57	75.17	.54	946.29	5.86
December..	11,546	927	856	959	886	7	80.28	74.13	.61	923.88	7.30
Total.	12,357	15,409	13,746	15,564	14,964	67	1,246.99	1,112.41	5.42	960.81	4.30

INTERNATIONAL TABLE V.—*Movement of sick in the larger garrisons—Officers and enlisted men.*

Garrisons.	Mean strength.	Total admissions.		Admissions to hospital.		Deaths.	
		Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.	Absolute numbers.	Per 1,000 of mean strength.
Fort D. A. Russell, Wyo	2,314	1,917	828.44	1,853	800.78	12	5.19
Fort Leavenworth, Kans	2,108	1,420	673.62	1,284	609.11	13	6.17
Presidio of San Francisco, Cal	1,988	1,641	825.45	1,301	654.43	3	1.51
Fort Riley, Kans	1,955	1,276	652.69	1,149	587.72	6	3.07
Vancouver Barracks, Wash	1,370	1,124	820.44	939	685.40	3	2.19
Fort Monroe, Va	1,369	770	562.45	675	493.06	3	2.19
Fort Slocum, N. Y	1,297	2,097	1,616.81	2,051	1,581.34	6	4.63
Jefferson Barracks, Mo	1,224	1,391	1,136.44	1,362	1,112.75	8	6.54
Fort Sheridan, Ill	1,215	717	590.12	655	539.09	5	4.12
Columbus Barracks, Ohio	1,195	2,056	1,720.50	1,919	1,605.86	16	13.39
Fort Sam Houston, Tex	1,083	1,011	933.52	867	800.55	5	4.62
Fort Snelling, Minn	1,024	825	805.66	718	701.17	3	2.93
Fort Sill, Okla	980	558	569.39	533	543.88	3	3.06
Fort Douglas, Utah	876	787	898.40	662	755.71	6	6.85
Monterey (Presidio of) Cal	850	716	842.35	602	708.24	5	5.88
Fort Oglethorpe, Ga	845	887	1,049.70	575	680.47	3	3.55
Plattsburgh Barracks, N. Y	817	481	588.74	423	517.75	2	2.45
Fort Ethan Allen, Vt	799	490	613.27	457	571.96	4	5.01
West Point, N. Y	784	431	549.74	336	428.57	4	5.10
Fort Totten, N. Y	769	508	660.60	419	544.86	3	3.90
Fort McPherson, Ga	761	714	938.24	632	830.49	4	5.26
Fort McKinley, Me	758	415	547.49	365	481.53	2	2.64
Fort Hancock, N. J	749	347	463.28	295	393.86	2	2.67
Fort Benjamin Harrison, Ind	744	687	923.39	520	698.92	2	2.69
Fort Des Moines, Iowa	730	554	758.90	368	504.11	2	2.74
Fort Myer, Va	714	475	665.27	458	641.46	2	2.80
Fort Terry, N. Y	712	419	588.48	385	540.73	2	2.81
Fort H. G. Wright, N. Y	685	462	674.45	405	591.24	2	2.92
Fort McDowell, Cal	677	579	855.24	493	728.21	....	....
Washington Barracks, D. C	649	322	496.15	145	223.42	2	3.08
Fort Logan, Colo	646	963	1,490.71	684	1,058.82	2	3.10
Fort Worden, Wash	644	285	442.55	256	397.52	2	3.11
Fort Winfield Scott, Cal	611	284	464.81	179	292.96	1	1.64
Fort William H. Seward, Alaska	362	208	574.59	170	469.61	2	5.52
Fort Gibbon, Alaska	297	137	461.28	112	377.10	2	6.73
Fort Liscum, Alaska	200	94	470.00	68	340.00	1	5.00
Fort St. Michael, Alaska	167	72	431.14	60	359.28	1	5.99
Fort Davis, Alaska	158	102	645.57	72	455.70	1	6.33
Schofield Barracks, Hawaii	2,773	2,731	984.85	2,299	829.06	13	4.69
Fort Shafter, Hawaii	372	319	857.53	284	763.44	1	2.69
Fort Ruger, Hawaii	236	95	402.54	68	288.14	1	4.24
Fort DeRussy, Hawaii	168	101	601.19	73	434.52	....	....
Fort Wm. McKinley, P. I	3,228	4,320	1,338.29	3,970	1,229.86	14	4.34
Fort Mills, P. I	1,653	1,290	780.40	1,193	721.72	3	1.81
Camp Keithley, P. I	1,288	918	712.73	904	701.86	12	9.32
Camp Stotsenburg, P. I	1,232	1,696	1,376.62	1,589	1,289.77	7	5.68
Augur Barracks, P. I	1,108	1,844	1,664.26	1,780	1,606.50	5	4.51
Camp Gregg, P. I	859	257	299.19	241	280.56	4	4.66
Camp McGrath, P. I	834	1,608	1,928.06	1,013	1,214.63	1	1.20
Cuartel de Espana, P. I	740	509	687.84	467	631.08	....	....
Ludlow Barracks, P. I	580	713	1,229.31	682	1,175.86	3	5.17
Pettit Barracks, P. I	508	413	812.99	406	799.21	1	1.97
Camp Eldridge, P. I	460	482	1,047.83	447	971.74	6	13.04
Camp Jossman, P. I	408	507	1,242.65	421	1,031.86	5	12.25
Camp Connell, P. I	348	244	701.15	232	666.67	1	2.87
Regan Barracks, P. I	331	312	942.60	294	888.22	1	3.02
Warwick Barracks, P. I	324	227	700.62	206	635.80	2	6.17
Torrey Barracks, P. I	314	188	598.73	185	589.17	2	6.37

INTERNATIONAL TABLE VI.—*Movement of sick according to most important diseases, Army, enlisted men, year 1912.*

Diseases of the international nosological table.	Absolute numbers.									Proportionate numbers.					
	Remaining at close of 1911.	Admitted 1912.	Total remaining and admitted.	Disposed of in 1912.				Remaining at close of 1912.	Total days sick in 1912.	Per 1,000 of mean strength.		Per 1,000 disposed of.			Average days of treatment.
				Fit for duty.	Died.	Otherwise.	Total.			Admissions.	Deaths.	Fit for duty.	Died.	Otherwise.	
1. Alkoholismus acutus, including delirium tremens	21	1,201	1,222	1,175	10	26	1,211	14	4,777	15.34	0.13	970.27	8.26	21.47	3.98
2. Appendicitis, typhlitis, and perityphlitis	40	516	556	482	8	22	512	43	14,874	6.59	.10	941.41	15.63	42.97	28.82
3. Bronchitis acuta	29	2,590	2,619	2,525		28	2,553	66	17,022	33.09		989.03		10.97	6.57
4. Cholera Asiatica															
5. Cholera nostras		3	3	3			3		8	.04		1,000.00			2.67
6. Diphtheria et croup	13	79	92	88		2	90	3	1,614	1.01		977.78		22.22	20.43
7. Dysenteria	21	337	358	318	2	17	337	20	8,834	4.31	.03	943.62	5.93	50.45	26.21
8. Erysipelas		27	27	24		2	26	1	454	.34		923.07		76.92	16.81
9. Febris intermittens (malaria)[1]	39	2,307	2,346	2,305		31	2,336	11	15,841	29.48		986.72		13.27	6.87
10. Febris recurrens															
11. Fractura ossium	98	938	1,036	863	18	69	950	104	41,343	11.98	.23	908.42	18.95	72.63	44.08
12. Gonorrhea	379	6,208	6,587	5,312	1	1,089	6,402	186	119,573	79.32	.01	829.74	.10	170.10	19.26
13 Hernia	27	299	326	260		41	301	26	11,877	3.82		863.79		136.21	39.72
14. Influenza	10	1,262	1,272	1,202		13	1,215	57	7,419	16.12		989.30		10.70	5.88
15. Insolatio (Hitzschlag coup de chaleur)		5	5	4	1		5		97	.06	.01	800.00	200.00		19.40
16. Luxationes articulorum	13	231	244	229		8	237	9	4,699	2.95		966.24		33.76	20.34
17. Meningitis cerebro-spinalis epidemica		13	13	3	6	1	10	3	256	.17	.08	300.00	600.00	100.00	19.69
18. Morbilli	47	508	555	494	13	34	541	13	10,952	6.49	.16	913.12	24.03	62.85	21.56
19. Parotitis epidemica	33	1,330	1,363	1,279			1,279	42	22,099	16.99		1,000.00			16.62
20. Pleuritis	9	252	261	236		9	245	16	6,666	3.22		963.27		36.73	26.45
21. Pneumonia crouposa sive lobaris	9	178	187	148	12	7	167	20	5,156	2.27	.15	886.22	71.86	41.92	28.97
22. Rheumatismus articulorum	31	713	744	657	5	36	698	45	16,833	9.11	.06	941.26	7.16	51.58	23.61
23. Scarlatina		14	14	12		1	13	1	400	.18		923.08		76.92	28.57
24. Scorbutus															
25. Syphilis	187	2,224	2,411	2,153	6	182	2,341	69	56,420	28.42	.08	919.69	2.56	77.74	25.37
26. Trachoma	2	25	27	21		3	24	3	480	.32		875.00		125.00	19.20
27. Tuberculosis pulmonum[2]	78	241	319	33	21	126	180	136	37,572	3.08	.26	183.33	116.67	700.00	155.90
28. Tuberculosis ceterorum organorum	3	32	35	16	4	9	29	10	2,577	.42	.05	551.72	137.93	310.34	80.53
29. Typhus abdominalis	9	21	30	25	2	2	29	1	1,453	.27	.03	862.07	68.97	68.97	69.19
30. Typhus exanthematicus		1	1	1			1		42	.01		1,000.00			42.00
31. Ulcus molle	174	2,267	2,441	2,107	1	288	2,396	45	47,045	28.96	.01	879.38	.42	120.20	20.75
32. Variola	1	6	7	6			6	1	192	.08		1,000.00			32.00
33. Morbi auris	26	448	474	417	1	45	463	11	7,558	5.72	.01	900.65	2.16	97.19	16.87

34. Morbi cordis [3]	16	145	161	76	8	63	147	13	6,498	1.85	.18	517.01	54.42	428.57	44.81
35. Morbi cutis [4]	54	2,494	2,548	2,464	....	36	2,500	48	24,825	31.84	....	985.60	....	14.40	9.95
36. Morbi mentis	40	270	310	46	2	219	267	44	22,124	3.45	.03	172.28	7.49	820.22	81.94
37. Morbi oculi	26	713	739	680	....	31	711	28	9,117	9.11	....	956.40	....	43.60	12.79
38. Morbi systemat urin et sexual (excluding venerie et syphilis)	42	910	952	824	14	85	923	29	15,841	11.63	.18	892.74	15.17	92.09	17.41

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[1] Malarial fever intermittent only.

[2] Includes tuberculosis of the larynx.

[3] Includes pericarditis and endocarditis.

[4] Diseases of the skin proper only.

INTERNATIONAL TABLE VII.—*Most important diseases, by arms of service (enlisted men).*

Diseases of the international nosological table.	Absolute numbers. Admissions by arms of service.									Proportionate numbers. Admissions per 1,000 of mean strength.								
	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
1. Alkoholismus acutus, including delirium tremens	445	114	378	50	12	24	21	86	71	15.97	8.69	21.68	9.77	6.87	33.99	17.84	25.24	9.23
2. Appendicitis typhlitis and perityphlitis	137	107	98	30	18	5	9	49	63	4.92	8.15	5.62	5.86	10.30	7.08	7.65	14.38	8.19
3. Bronchitas acuta	886	319	487	166	51	24	30	86	541	31.80	24.31	27.93	32.45	29.19	33.99	25.49	25.24	70.32
4. Cholera Asiatica	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
5. Cholera nostras	......	......	3	......	......	......	......	......	......	......	......	.17	......	......	......	......	......	......
6. Diphtheria et croup	53	7	4	4	3	......	1	6	1	1.90	.53	.23	.78	1.72	......	.85	1.76	.13
7. Dysenteria	167	106	23	12	7	......	1	15	6	5.99	8.08	1.32	2.35	4.01	......	.85	4.40	.78
8. Erysipelas	4	7	6	1	......	1	......	......	8	.14	.53	.34	.20	......	1.42	......	......	1.04
9. Febris intermittens (malaria [1])	1,050	437	204	234	127	4	8	63	180	37.69	33.30	11.70	45.74	72.70	5.67	6.80	18.49	23.39
10. Febris recurrens	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
11. Fractura ossium	294	225	167	95	30	5	13	27	82	10.55	17.15	9.58	18.57	17.17	7.08	11.04	7.92	10.66
12. Gonorrhea	2,622	1,082	1,131	458	128	13	49	177	548	94.11	82.46	64.86	89.52	73.27	18.41	41.63	51.95	71.23
13. Hernia	101	47	49	12	6	4	......	15	65	3.63	3.58	2.81	2.35	3.43	5.67	......	4.40	8.45
14. Influenza	411	207	331	101	19	44	15	70	64	14.75	15.78	18.98	19.74	10.88	62.33	12.74	20.54	8.32
15. Insolatio (Hitzsclag, coup de chaleur)	2	......	1	......	1	......	......	......	1	.07	......	.06	......	.57	......	......	......	.13
16. Luxationes articulorum	83	55	40	24	3	1	1	4	20	2.98	4.19	2.29	4.69	1.72	1.42	.85	1.17	2.60
17. Meningitis cerebro-spinalis epidemica	2	1	1	4	......	......	......	......	5	.07	.08	.06	.78	......	......	......	......	.65
18. Morbilli	147	8	70	4	6	1	7	12	253	5.28	.61	4.01	.78	3.43	1.42	5.95	3.52	32.89
19. Parotitis epidemica	451	82	198	104	26	......	3	17	449	16.19	6.25	11.35	20.33	14.88	......	2.55	4.99	58.37
20. Pleuritis	101	35	45	16	6	......	2	20	27	3.63	2.67	2.58	3.13	3.43	......	1.70	5.87	3.51
21. Pneumonia crouposa sive lobaris	65	24	31	7	4	1	3	7	36	2.33	1.83	1.78	1.37	2.29	1.42	2.55	2.05	4.68

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[1] Malarial fever, intermittent only.

INTERNATIONAL TABLE VII.—*Most important diseases, by arms of service (enlisted men)*—Continued.

Diseases of the international nosological table.	Absolute numbers. Admission by arms of service.									Proportionate numbers. Admissions per 1,000 of mean strength.								
	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.	Infantry.	Cavalry.	Coast Artillery.	Field Artillery.	Engineers.	Ordnance.	Signal Corps.	Hospital Corps.	Others.
22. Rheumatismus articulorum	257	109	137	64	11	8	5	30	92	9.22	8.31	7.86	12.51	6.30	11.33	4.25	8.81	11.96
23. Scarlatina	2	5	1	......	......	......	......	2	4	.07	.38	.06	......	......	......	......	.59	.52
24. Scorbutus	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
25. Syphilis	819	476	473	117	38	6	31	85	179	29.40	36.28	27.12	22.87	21.75	8.50	26.34	24.95	28.27
26. Trachoma	4	1	1	......	2	......	......	......	17	.14	.08	.06	......	1.14	......	......	......	2.21
27. Tuberculosis pulmonum [1]	83	33	41	23	6	1	3	20	31	2.98	2.52	2.35	4.50	3.43	1.42	2.55	5.87	4.08
28. Tuberculosis ceterorum organorum	16	5	4	3	1	......	1	......	2	.57	.38	.23	.59	.57	......	.85	......	.26
29. Typhus abdominalis	8	4	1	1	1	......	......	......	6	.29	.30	.06	.20	.57	......	......	......	.78
30. Typhus exanthematicus	1	......	......	......	......	......	......	......	......	.03	......	......	......	......	......	......	......	......
31. Ulcus molle	1,079	391	347	164	53	4	23	55	151	38.73	29.80	19.90	32.06	30.34	5.67	19.54	16.14	19.63
32. Variola	3	......	......	2	......	......	......	......	1	.11	......	......	.39	......	......	......	......	.13
33. Morbi auris	178	75	75	26	16	3	7	14	54	6.39	5.72	4.30	5.08	9.16	4.25	5.95	4.11	7.02
34. Morbi cordis [2]	50	13	23	14	3	2	......	13	27	1.79	.99	1.32	2.74	1.72	2.83	......	3.82	3.51
35. Morbi cutis [3]	928	401	448	191	57	18	28	51	372	33.31	30.56	25.69	37.33	32.63	25.50	23.79	14.97	48.35
36. Morbi mentis	101	35	58	7	3	1	5	18	42	3.63	2.67	3.33	1.37	1.72	1.42	4.25	5.28	5.46
37. Morbi oculi	265	115	131	52	15	5	7	22	101	9.51	8.76	7.51	10.16	8.59	7.08	5.95	6.46	13.13
38. Morbi systemat., urin et sexual (excluding venerie et syphilis)	272	154	198	63	14	7	4	45	153	9.76	11.74	11.35	12.32	8.02	9.92	3.40	13.	19.89

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[1] Includes tuberculosis of the larynx.

[2] Includes pericarditis and endocarditis.

[3] Diseases of the skin proper only.

INTERNATIONAL TABLE VIII.—*Most important diseases, by months.*

Diseases of the international nosological table.	Admissions by months.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1. Alkoholismus	110	99	110	83	83	93	51	77	111	123	134	127
2. Appendicitis, typhlitis, and perityphlitis	39	41	39	43	45	40	55	45	43	45	87	44
3. Bronchitis acuta	269	249	307	207	219	176	174	131	147	165	198	348
4. Cholera Asiatica	....	....	....	....	....	....	....	....	....	....	....	....
5. Cholera nostras	....	....	....	....	....	....	....	2	1	....	....	....
6. Diphtheria et croup	23	15	7	4	2	1	2	1	2	....	20	2
7. Dysenteria	21	21	25	36	31	24	32	42	35	24	18	28
8. Erysipelas	3	6	3	4	....	2	3	....	3	1	1	1
9. Febris intermittens (malaria)	107	153	263	263	286	305	254	203	190	155	62	66
10. Febris recurrens	....	....	....	....	....	....	....	....	....	....	....	....
11. Fractura, ossium	75	58	66	93	78	92	62	77	89	83	86	79
12. Gonorrhea	664	545	556	499	533	559	588	498	557	484	377	348
13. Hernia	27	25	18	28	25	23	34	18	31	28	22	20
14. Influenza	122	112	140	84	76	48	72	45	58	76	98	336
15. Insolatio (Hitzschlag coup de chaleur)	....	....	....	....	1	1	1	1	1	....	....	....
16. Luxationes articulorum	14	15	9	16	19	22	18	22	25	23	25	23
17. Meningitis cerebro-spinalis epidemica	8	....	1	2	1	....	1	....	....	....	3	2
18. Morbilli	92	93	92	91	88	27	50	7	1	....	2	15
19. Parotitis epidemica	86	151	296	341	187	75	50	15	18	10	38	63
20. Pleuritis	18	19	31	25	26	25	23	18	22	14	12	19
21. Pneumonia crouposa sive lobaris	31	18	13	23	15	13	13	6	4	9	7	26
22. Rheumatismus, articulorum	59	78	89	101	57	56	56	46	36	38	38	59
23. Scarlatina	....	1	5	....	5	....	....	....	....	....	2	1
24. Scorbutus	....	....	....	....	....	....	....	....	....	....	....	....
25. Syphilis	242	211	228	160	163	174	208	170	172	198	168	135
26. Trachoma	3	....	2	1	3	3	3	3	1	....	2	4
27. Tuberculosis pulmonum	30	12	26	18	15	17	16	25	21	18	27	16
28. Tuberculosis ceterorum organorum	3	....	3	4	2	3	4	5	2	1	2	3
29. Typhus abdominalis	1	2	1	4	2	2	2	2	1	4	....	....
30. Typhus exanthematicus	....	....	....	....	....	1	....	....	....	....	....	....
31. Ulcus molle	258	217	208	197	240	201	186	161	185	184	122	108
32. Variola	....	....	....	1	2	....	....	1	....	....	1	1
33. Morbi auris	39	43	51	30	53	36	47	35	28	27	31	33
34. Morbi cordis	13	13	12	16	19	10	5	17	9	16	6	9
35. Morbi cutis	220	188	169	179	190	198	276	253	218	230	192	181
36. Morbi mentis	20	22	25	23	19	31	23	23	23	15	22	24
37. Morbi oculi	70	46	47	75	54	65	61	57	62	63	57	56
38. Morbi systemat, urin et sexual (excluding venerie et syphilis)	69	81	80	85	90	65	83	81	68	69	64	75

INTERNATIONAL TABLE IX.—*Deaths by rank, by length of service, and by age.*

Causes of death.	Total number of deaths (enlisted men).		Deaths by rank and length of service.				Deaths by age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Deaths from sickness	189	2.37	45	38	18	88	15	45	33	36	15	45
Soldiers present with troops	135	1.70	31	34	13	57	14	33	24	26	6	32
Soldiers absent from troops	54	.68	14	4	5	31	1	12	9	10	9	13
Accidental deaths	138	1.73	28	32	25	53	5	64	26	21	12	10
Soldiers present with troops	98	1.23	20	21	18	39	5	43	19	13	9	9
Soldiers absent from troops	40	.50	8	11	7	14	....	21	7	8	3	1
Suicides	54	.68	12	14	2	26	1	19	15	12	2	5
Soldiers present with troops	37	.46	7	8	2	20	1	13	11	7	1	4
Soldiers absent from troops	17	.21	5	6	......	6	....	6	4	5	1	1
Total	381	4.79	85	84	45	167	21	128	74	69	29	60

INTERNATIONAL TABLE X.—*Discharges from the Army for physical disability, temporary or permanent, by rank, length of service, and by age.*

Causes of discharge.	Total discharges (enlisted men).		Rank and length of service.				Age.					
	Absolute numbers.	Per 1,000 of mean strength.	Noncommissioned officers.	Soldiers in first year of service.	Soldiers in second year of service.	Soldiers in third year of service and beyond.	20 and under.	21 to 25.	26 to 30.	31 to 35.	36 to 40.	41 and over.
Physical disability existent prior to enlistment	523	6.57	5	373	88	57	80	292	100	43	7	1
Physical disability incident to service.	406	5.10	59	97	68	182	25	175	94	53	30	29
Physical disability not incident to service	140	1.76	14	26	37	63	7	54	40	22	11	6
Total	1,069	13.43	78	496	193	302	112	521	234	118	48	36

Very respectfully,

GEO. H. TORNEY,
Surgeon General, U. S. Army.

The SECRETARY OF WAR.

REPORT OF THE CHIEF OF ORDNANCE.

REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ORDNANCE,
Washington, September 1, 1913.

SIR: I have the honor to submit the following report on the principal operations of the Ordnance Department during the past fiscal year, together with certain remarks as to its interests and necessities.

PERSONNEL.

As mentioned in my last annual report, the undersigned was on September 1, 1912, relieved from the command of the Ordnance Department and assigned to duty as president of the Army War College. He was relieved from this latter duty and returned to the command of the Ordnance Department on July 1, 1913. During the period from September 1, 1912, to July 1, 1913, Col. Rogers Birnie, Ordnance Department, performed the duties of Acting Chief of Ordnance.

Since the date of my last annual report one officer, Col. Charles H. Clark, has been retired from active service at his own request after more than 41 years' service. Fourteen officers have left the department by reason of expiration of detail in it. Nine officers with previous service in the department have been redetailed in it, and the same number have been detailed. The total strength of the department in officers at the date of my last annual report was 82. This strength at present is 85, a gain of 3. The department is of the full statutory strength for the first time since the passage of the act of February 2, 1901. Of the nine officers entering the department on their first detail seven came from the Coast Artillery and one each from the Field Artillery and Cavalry.

FISCAL AFFAIRS.

The statement giving the receipts and expenditures of the Ordnance Department under general headings for the fiscal year of 1913 is herewith submitted in tabular form, so as to show the data under the various appropriations made for the service of this department, including those for experiments conducted under the direction of the Board of Ordnance and Fortification, and for the purchase of submarine mines, the control of which rests with the Chief of Coast Artillery.

The tables constituting the statement show that on July 1, 1912, there was in the Treasury and in the possession of disbursing officers the sum of $13,967,752.03.

Statement of receipts and expenditures of appropriations under control of the Ordnance Department for the fiscal year ended June 30, 1913.

RECEIPTS.

Appropriation.	Amount in the Treasury to the credit of the appropriation on June 30, 1912.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1912.	Amount in Government depositories to the credit of disbursing officers on June 30, 1912.	Amount due from other appropriations at the close of the fiscal year ended June 30, 1912.	Amount of appropriation for the service of the fiscal year ended June 30, 1913.	Amount refunded to Ordnance appropriations in settlement of accounts during the fiscal year ended June 30, 1913.	Amount received from sales, loss, damage, rent, etc., during the fiscal year ended June 30, 1913.	Total.
Ordnance service:								
1911	$2,752.40					$0.25	$3.86	$2,756.51
1912	13,062.58	$256.21	$42,834.13			923.74	9.73	57,086.39
1913					$300,118.30	2,311.09	119.69	302,549.08
Ordnance stores, ammunition:								
1910 and 1911	66.33							66.33
1911 and 1912	17,224.34		18,357.54					35,581.88
1912 and 1913	176,042.10		48,272.88					224,314.98
1913 and 1914					250,000.00			250,000.00
Ordnance stores and supplies:								
1910 and 1911	1,253.76							1,253.76
1911 and 1912	1,867.92		45,912.22					47,780.14
1912 and 1913	409,900.97	7.20	37,454.37			86.93	7.59	446,457.06
1913 and 1914					700,000.00	7,534.00		707,534.00
Small-arms target practice:								
1910 and 1911	260.07		.68					260.75
1911 and 1912	42,133.70		24,428.30					66,562.00
1912 and 1913	723,126.61	183.09	74,458.29			28.85	1.73	797,798.57
1913 and 1914					800,000.00	666.74	6.00	800,672.74
Repairs of arsenals:								
1911	1,142.05							1,142.05
1912	60,761.02	237.76	54,313.77					115,312.55
1913					290,000.00		30.96	290,030.96
Replacing ordnance and ordnance stores:								
1910 and 1911	764.04		19,722.67	$9,732.27				30,218.98
1911 and 1912	354,404.72	13.00	95,663.15			13,327.01		463,407.88
1912 and 1913	1,350,671.58	14,800.80	53,760.84			582,420.83	734.67	2,002,388.72
1913 and 1914						1,074,995.92	131,177.55	1,206,173.47
Manufacture of arms:								
1910 and 1911	479.83		11.36					491.19
1911 and 1912	289,199.68		12,160.74			15.99		301,376.41
1912 and 1913	410,994.80	10.80	87,712.01			30.73	112.00	498,860.34
1913 and 1914					700,000.00	1,803.94	22.00	701,825.94

Automatic rifles:								
1910 and 1911	69,063.86		7,345.08					76,408.94
1911 and 1912	16,163.83		21,359.34					37,523.17
1912 and 1913	134,837.84		30,703.23					165,541.07
1913 and 1914					150,000.00			150,000.00
Exchanging or issuing new pistols, ammunition, etc., Organized Militia	300,000.00							300,000.00
Field Artillery for Organized Militia	340,661.48	3.27	18,803.24				1.98	359,469.97
1911-1913	607,455.37		27,120.79					634,576.16
1913 and 1914					1,000,000.00			1,000,000.00
1913-1915					1,000,000.00			1,000,000.00
Ammunition for Field Artillery, Organized Militia:								
1913					100,000.00			100,000.00
1913-1915					500,000.00			500,000.00
Equipment of Coast Artillery armories, Organized Militia, 1912	147,901.88		15,575.88		60.00			163,537.76
National trophy and medals for rifle contests:								
1911	.24							.24
1912	28.34		1,228.02			15.12		1.271.48
1913					10,000.00			10,000.00
Encampment and maneuvers, Organized Militia:								
1909-1911	108.93							108.93
1910-1912	924.46		5,313.74					6,238.20
1911-1913	18,681.20		1,267.81					19,949.01
Act of July 8, 1912					108,920.34			108,920.34
1913-1915					58,013.97			58,013.97
Powder and projectiles (proceeds of sales)								
Testing machine:								
1911	285.18							285.18
1912		51.62	1,280.09			16.07		1,347.78
1913					15,000.00	8.26	830.62	15,838.88
Fire control at fortifications	12,515.11		2,055.82		101,180.00	885.00		116,635.93
Fire control in insular possessions	40,719.91		1,855.27		20,000.00			62,575.18
Fire control in field batteries, 1910 and 1911	13,131.20		34.37					13,165.57
Ordnance material (proceeds of sales)	2,922.30	90.29	2,043.08		75,000.00		66,953.85	147,009.52
Board of Ordnance and Fortification	6,717.41		13,861.05		33,656.61			54,235.07
Replacing and repairing ordnance property at Gulf forts	13,748.18		1,257.64					15,005.82
Submarine mines	162,006.56		70,753.55		118,000.00	409.50	15.58	351,185.19
In insular possessions	9,288.74		9,185.38		76,162.00			94,636.12
Isthmian Canal					111,750.00			111,750.00
Armament of fortifications, Isthmian Canal	498,945.73		86,334.63		1,075,000.00			1,660,280.36
Fortifications in insular possessions	1.289,640.14	381.78	263,027.40		511,819.00	113,811.47		2,178,679.79
Armament of fortifications	4,363,791.41	2,853.15	449,173.53		2,693,593.39	45,962.98	1,449.02	7,556,823.48
Augusta Arsenal, Augusta, Ga	255.68		83.18					338.86
Benicia Arsenal, Benicia, Cal	6,175.21		8,531.79					14,707.00
Frankford Arsenal, Philadelphia, Pa			6,680.30					6,680.30
Ordnance depot, Manila, P. I	10,286.38							10,286.38
Proving ground, Sandy Hook, N. J	114,477.43	31.79	12,363.41		80,900.00	13,596.14	3,576.21	224,944.98
Picatinny Arsenal, Dover, N. J	22,564.45		13,342.75		3,500.00			39,407.20
Rock Island Arsenal, Rock Island, Ill	20,550.76		17,072.98					37,623.74

Statement of receipts and expenditures of appropriations under control of the Ordnance Department for the fiscal year ended June 30, 1913—Continued.

RECEIPTS—Continued.

Appropriation.	Amount in the Treasury to the credit of the appropriation on June 30, 1912.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1912.	Amount in Government depositories to the credit of disbursing officers on June 30, 1912.	Amount due from other appropriations at the close of the fiscal year ended June 30, 1912.	Amount of appropriation for the service of the fiscal year ended June 30, 1913.	Amount refunded to Ordnance appropriations in settlement of accounts during the fiscal year ended June 30, 1913.	Amount received from sales, loss, damage, rent, etc., during the fiscal year ended June 30, 1913.	Total.
Rock Island bridge, Rock Island, Ill.:								
1911	$5.82							$5.82
1912			$2,748.31					2,748.31
1913					$18,000.00			18,000.00
Rock Island power plant, Rock Island, Ill.:								
1911	192.45							192.45
1912	385.16		6,678.92			$26.45	$4.75	7,095.28
1913					12,500.00	346.93	64.01	12,910.94
Springfield Arsenal, Springfield, Mass	4,027.73		588.89		5,000.00			9,616.62
Equipment of Coast Artillery, Organized Militia, 1911	.37		22.72					23.09
Blank ammunition, maneuver camps, 1911	3,239.68							3,239.68
Watertown Arsenal, Watertown, Mass	84,781.77	$0.14	5,981.10					90,763.01
Watervliet Arsenal, West Troy, N. Y	7,432.02		7,648.97		15,950.00			31,030.99
Replacing ordnance equipment, State of Massachusetts	42,423.21							42,423.21
Miscellaneous receipts							6,463.55	6,463.55
Total	12,222,445.92	18,920.90	1,726,385.21	$9,732.27	10,934,123.61	1,859,223.94	211,585.35	26,982,417.20

DISBURSEMENTS.

Appropriation.	Amount of expenditures during the fiscal year ended June 30, 1913.	Amount paid and transferred on Treasury settlements, etc., during the fiscal year ended June 30, 1913.	Amount deposited in the Treasury as proceeds of sales during the fiscal year ended June 30, 1913.	Amount covered into the Treasury on account of miscellaneous receipts during the fiscal year ended June 30, 1913.	Amount covered into the surplus fund of the Treasury on June 30, 1913.	Amount in Government depositories to the credit of disbursing officers on June 30, 1913.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1913.	Amount in the Treasury to the credit of the appropriation on June 30, 1913.	Total.
Ordnance service:									
1911		$142.26			$2,614.25				$2,756.51
1912	$50,729.02	4,546.09				$12.75	$2.85	$1,796.68	57,086.39
1913	257,513.77	2,803.64				33,252.92	988.80	7,989.95	302,549.08
Ordnance stores, ammunition:									
1910 and 1911					66.33				66.33
1911 and 1912	33,790.16	166.79				287.97		1,336.96	35,581.88
1912 and 1913	162,110.12	39.75				3,212.56		58,952.55	224,314.98
1913 and 1914	12,446.96	6.00				60,251.86		177,295.18	250,000.00
Ordnance stores and supplies:									
1910 and 1911					1,253.76				1,253.76
1911 and 1912	46,661.62							1,118.52	47,780.14
1912 and 1913	435,763.43	411.87				5,009.50	44.46	6,227.80	447,457.06
1913 and 1914	264,267.82					92,156.99	25.00	351,084.19	707,534.00
Small-arms target practice:									
1910 and 1911	.68				260.07				260.75
1911 and 1912	64,709.43							1,852.57	66,562.00
1912 and 1913	636,000.47	748.44				60,682.25		100,367.41	797,798.57
1913 and 1914	97,513.66	30.12				254,869.13	306.01	447,953.82	800,672.74
Repairs of arsenals:									
1911					1,142.05				1,142.05
1912	109,046.10	210.91				4,653.01	.10	1,402.43	115,312.55
1913	184,620.18	68.37				89,226.18	1,936.55	14,179.68	290,030.96
Replacing ordnance and ordnance stores:									
1910 and 1911	27,809.83	48.01			2,361.14				30,218.98
1911 and 1912	319,977.86	5,938.43				18,061.38		119,430.21	463,407.88
1912 and 1913	1,362,977.07	1,571.21				161,309.92		476,530.52	2,002,388.72
1913 and 1914	128,122.32	496.16				103,283.85	14,678.26	959,592.88	1,206,173.47
Manufacture of arms:									
1910 and 1911		52.00			439.19				491.19
1911 and 1912	300,070.41	12.50				33.20		1,260.30	301,376.41
1912 and 1913	482,257.76	1,287.87				8,547.17		6,767.54	498,860.34
1913 and 1914	322,273.72	35.50				102,379.34	38.90	277,098.48	701,825.94

ment of receipts and expenditures of appropriations under control of the Ordnance Department for the fiscal year ended June 30, 1913—Continued.

DISBURSEMENTS—Continued.

Appropriation.	Amount of expenditures during the fiscal year ended June 30, 1913.	Amount paid and transferred on Treasury settlements, etc., during the fiscal year ended June 30, 1913.	Amount deposited in the Treasury as proceeds of sales during the fiscal year ended June 30, 1913.	Amount covered into the Treasury on account of miscellaneous receipts during the fiscal year ended June 30, 1913.	Amount covered into the surplus fund of the Treasury on June 30, 1913.	Amount in Government depositories to the credit of disbursing officers on June 30, 1913.	Amount in the Treasury not reported to the credit of the appropriation on June 30, 1913.	Amount in the Treasury to the credit of the appropriation on June 30, 1913.	Total.
Automatic rifles:									
1910 and 1911	$76,408.94								$76,408.94
1911 and 1912	37,477.17							$46.00	37,523.17
1912 and 1913	162,928.04	$61.39				$2,550.83		.81	165,541.07
1913 and 1914	41,784.81					23,846.89		84,368.30	150,000.00
Exchanging or issuing new pistols, ammunition, etc., Organized Militia	23,279.77					23,357.53		253,362.70	300,000.00
Field artillery for Organized Militia	21,041.37	471.13				41,727.79	$8.51	296,221.17	359,469.97
1911-1913	440,984.93	191.40				46,949.78		146,450.05	634,576.16
1913 and 1914	86,092.07	49,641.60				70,984.63		793,281.70	1,000,000.00
1913-1915	614.11					15,031.14		984,354.75	1,000,000.00
Ammunition for field artillery, Organized Militia:									
1913	83,292.20					16,707.80			100,000.00
1913-1915								500,000.00	500,000.00
Equipment of Coast Artillery armories, Organized Militia, 1912	151,262.88	4,659.66				3,267.77	4.89	4,342.56	163,537.76
National trophy and medals for rifle contests:									
1911					$0.24				.24
1912	1,225.30	27.00				2.72		16.46	1,271.48
1913	5,049.10	189.77				1,532.08		3,229.05	10,000.00
Encampment and maneuvers, Organized Militia:									
1909-1911					108.93				108.93
1910-1912	5,310.69							927.51	6,238.20
1911-1913	4,597,38					3,097.12	131.32	12,123.19	19,949.01
Act of July 8, 1912	3,021.53					518.47		105,385.84	108,920.84
1913-1915								58,018.97	58,018.97
Powder and projectiles (proceeds of sales)									
Testing machine:									
1911					285.18				285.18
1912	1,268.89	51.62				1.20		26.07	1,347.78
1913	12,616.81					2,886.78	310.00	25.29	15,838.88

116,635.93	101,181.98	....
62,575.18	46,396.57	....
13,165.57	....	....
147,009.52	16,305.90	....
54,235.07	24,335.89	....
15,005.82	13,767.21	....
351,185.19	155,271.40	2.40
94,636.12	81,584.22	....
111,780.00	110,335.00	....
1,660,280.36	909,707.59	....
2,178,679.79	1,213,353.14	[illegible]
7,556,823.48	5,084,162.39	7,133.40
338.86	255.97	
14,707.00	4,305.21	
6,080.30	....	
10,286.38	1,330.49	
224,944.98	101,452.98	[illegible]
39,407.39	7,000.00	
37,633.74	530.78	
3.82	....	
2,748.31	....	
[illegible]	....	
[illegible]	....	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]		
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	

The total amount of the appropriations for the fiscal year 1913, including those contained in the act making appropriations for fortifications and other works of defense, approved February 13, 1913, was $10,934,123.61. The total amount with which the appropriations were credited in accordance with authority of law from sales, transfers, etc., was $2,070,809.29. The total payments made by disbursing officers and by Treasury settlements during the year amounted to $10,323,885.69. The total sales of condemned stores during the year amounted to $66,919.31, all of which was credited on the books of the Treasury Department to "Ordnance material (proceeds of sales)." The total sales to other parties covered into the Treasury Department to the credit of the fund "Miscellaneous receipts" amounted to $6,463.55. The total amount to the credit of disbursing officers on June 30, 1913, was $2,399,262.75, and the total amount in the Treasury on the same date was $14,173,911.37.

FUNDS ON HAND AT THE BEGINNING AND CLOSE OF THE FISCAL YEAR.

The principal amounts on hand at the beginning of the year pertained to the following appropriations:

Ordnance stores and supplies, 1912 and 1913	$447,362.54
Replacing ordnance and ordnance stores:	
1911 and 1912	450,080.87
1912 and 1913	1,419,233.22
Manufacture of arms, 1912 and 1913	498,717.61
Field artillery for Organized Militia, 1911–1913	634,576.16
Armament of fortifications	4,815,818.09
Fortifications in insular possessions	1,553,049.32

The status of these appropriations at the close of the fiscal year will be seen by reference to the tabular statement.

The principal amounts on hand at the close of the fiscal year pertained to the following appropriations:

Small-arms target practice, 1913 and 1914	$703,128.96
Replacing ordnance and ordnance stores:	
1912 and 1913	637,840.44
1913 and 1914	1,077,554.99
Field artillery for Organized Militia:	
1913 and 1914	864,266.83
1913–1915	999,385.89
Fortifications in insular possessions	1,407,756.16
Armament of fortifications	5,685,822.66

The above amounts under the appropriations "Armament of fortifications" and "Fortifications in insular possessions" include the sums of $2,693,000 and $511,819 which had been appropriated at the last session of Congress, respectively. Under the law these appropriations are available on the approval of the act making them and until used.

The balances under the fund "Replacing ordnance and ordnance stores, 1913 and 1914" and the appropriation "Field artillery for Organized Militia, 1913 and 1914," are available for the fiscal year 1914.

Of the above amounts reported on hand at the close of the fiscal year the greater portion in nearly every case had been allotted to meet outstanding obligations. The available balances under the above-named appropriations at the close of the fiscal year are as follows:

Small-arms target practice, 1913 and 1914	$19,655.77
Replacing ordnance and ordnance stores:	
1912 and 1913	2,152.44
1913 and 1914	74,360.74
Field artillery for Organized Militia:	
1913 and 1914	15,375.25
1913–1915	819,417.25
Fortifications in insular possessions	208,356.66
Armament of fortifications	642,323.85

It will be seen in the case of the above-named appropriations that they were largely obligated at the close of the fiscal year, except in the case of the appropriations which had been made and increased at the preceding session of Congress.

TRANSFERS AND SALES OF SERVICEABLE ORDNANCE STORES.

The value of ordnance stores transferred to the executive departments and the Organized Militia is refunded to ordnance appropriations by Treasury settlements, and the funds received become available the year in which their disposition is effected and remain so during that and the following year for replacing the stores so transferred. The total value of the stores thus transferred amounted to $1,859,223.94. Of this amount $818,669.43 was on account of transfers to the Navy Department, $117,070.19 on account of transfers to the Marine Corps, $175,272.34 on account of transfers to other executive departments, and $748,211.98 on account of transfers to the Organized Militia. In conducting experiments for the Board of Ordnance and Fortification the value of the ordnance stores which were used in them amounted to $1,144.32, all of which was refunded to ordnance appropriations.

The total of the transfers and sales amounted to $2,070,809.29, which is 18 per cent of the total amount appropriated for the use of this department in arming, equipping, and supplying the Regular Army.

PAYMENT.

The total payments made by disbursing officers amounted to $10,204,316.74 and by Treasury settlements to $119,568.95, a total of $10,323,885.69. The appropriations proper for the year amounted to $10,934,123.61.

The amounts of disbursements made at the principal arsenals and in the Ordnance Office during the fiscal year are as follows:

Frankford Arsenal	$1,928,515.97
Rock Island Arsenal	2,845,769.17
Springfield Armory	936,673.91
Picatinny Arsenal	425,503.32
Watervliet Arsenal	339,139.66
Watertown Arsenal	874,021.17
Ordnance Office	2,110,252.36

AMOUNTS COVERED INTO THE SURPLUS FUND.

The principal amounts covered into the surplus fund of the Treasury were:

Ordnance service, 1911	$2,614.25
Ordnance stores and supplies, 1910 and 1911	1,253.76
Replacing ordnance and ordnance stores, 1910 and 1911	2,361.14
Repairs of arsenals, 1911	1,142.05
Blank ammunition, maneuver camps, 1911	3,239.68

COMPARISON OF THE FISCAL STATEMENT WITH THAT OF THE PRECEDING YEAR.

Comparing the fiscal statement with that of the preceding year it will be found that the amount of the appropriations was increased from $7,388,758.02 to $10,934,123.61, an increase of $3,545,365.59; the amount of disbursements decreased from $10,764,514.93 to $10,204,316.74. The amount received from transfers to the executive departments and the Organized Militia decreased from $2,481,777.60 to $1,859,223.94. The amount available for disbursement at the close of the fiscal year increased from $13,967,752.03 to $16,573,174.12, an increase of $2,605,422.09.

SCIENTIFIC MANAGEMENT.

In my annual reports for the fiscal years 1911 and 1912 I described the Taylor system of scientific management as it had been installed and put in practical operation at the Watertown Arsenal, and as certain features were in process of installation at other arsenals. The system has continued to operate well at the Watertown Arsenal, where a radical advance over the stage which its introduction has reached at the other arsenals is the application of the time study and premium features. These features have been fully described in my annual report for the fiscal year 1912; they relate to the ascertainment of the best method of doing a job of work, to the instruction of the workman in this method, and to the stimulation which is offered him for carefully following it. As there is very little repetition work at the Watertown Arsenal, and as the number of men who are capable of making time studies is limited, it is possible to have only a portion of the force at any given time engaged upon premium jobs. Effort is constantly being made, however, to increase their number, and the success which has been attained is made evident by the fact that whereas in August of 1912 only 114 men, of about 600 employed at that establishment, worked under the premium system, in the month of August, 1913, this number had been increased to 236; and while the amount paid out in premiums to these men in August, 1912, was $1,037.91, the amount so paid out in August, 1913, was $2,258.51. In the month of May, 1913, the percentage of the entire working time of the whole number of employees in the foundry, of the class who worked premium jobs at all, which was spent on such jobs was 66.95, and in the machine shop this percentage was 45.68. In the month of August, 1913, the percentage in the foundry was very nearly the same, namely, 67.18, but in the machine shop the figures advanced to 53.51 per cent. In the month of August the average premium earned by molders for the time they worked on premium jobs was 27.64 per cent of their day rate, and for the machinists this average was 26.96 per cent. The total amount paid out in premiums during the 17 months from January 1, 1912, to May 31, 1913, was something over $22,000. This was over and above the regular wages, which were the same as those in the vicinity, no reduction having been made.

It is a difficult matter to give in figures the amount of advantage which has accrued to the Government from the use of the system. None of the principal product of the arsenal which was completed during the fiscal year 1913 was identical with what had been completed during the preceding fiscal year, so that comparative costs are difficult. Also, none of the product of the arsenal is also procured from private manufacturers, so that this kind of comparison can not be had. A private establishment has very conclusive evidence as to the increase of economy and efficiency in production in the effect upon the balance of profit which is available for dividends; but this highly satisfactory method of estimating efficiency is not applicable in Government establishments. Analyses of a large number of different jobs, taken at random, made both in the fiscal years 1912 and 1913, show that the production of the individual when working under the premium system, with the rate set after careful study, is between two and a half and three times that under the ordinary day-work system. In four instances the same job was done by the same men under the two systems, and the average time taken under the day-work system was 2.72 times that taken under the premium system. It should be remembered that when time is gained in this way there is a saving not only of the pay of the workmen, but also of the frequently much more considerable overhead charges. A computation might be made as to the total saving to the Government upon this basis as compared with what the cost would have been expected to be under the day-work system, but of course it could only be approximate. It might be stated, however, that there has been revoked from allotments made Watertown Arsenal for doing its work during the fiscal year 1913 the sum of $73,401.05. This is the actual saving as compared with the amount which it was estimated in advance that the work would cost. It must be remembered, however, that part of these estimates were made in expectation of the use of the system which resulted in the savings, so that it does not afford a full estimate of the value of the system as compared with an estimate of the cost which might have been made without it. At some of the other arsenals the situation is better in this respect, for the reason that similar articles are both fabricated at the arsenal and procured from private manufacturers.

At the Frankford Arsenal this is the case to a very considerable extent, and as a result it is computed that in the manufacture of artillery ammunition and small-arms ammunition at that arsenal a saving of over $1,500,000 was made during the year as compared with what the same ammunition would have cost if procured from private establishments at the best prices which were offered. Also, in the manufacture under contract of these same two classes of ammunition, $400,000 more were paid than it would have cost to make it at the arsenal. The Taylor system, as taught by experts in shop management under this system, has not been introduced in the manufacture of artillery ammunition or small-arms ammunition at the Frankford Arsenal, but that arsenal has for a long time practiced the piecework system of payment, has recently introduced a premium system, and has paid careful attention to the same kind of methods of efficiency as those pertaining to the Taylor system, and has had the benefit of all the assistance which could be given by the Watertown Arsenal in taking advantage of the teachings of Mr. Barth, Taylor system expert, who had been employed at the latter place.

At the Rock Island Arsenal the systemization features of Mr. Taylor's system have been in course of installation for nearly two years, and elsewhere in this report are stated comparisons of costs of the different articles fabricated as compared with former prices. The method used in getting the system going at the Rock Island Arsenal was to send one of its officers to Watertown Arsenal for the purpose of learning as much as he could absorb of the system established at the latter place. It is not claimed that in the time that this officer spent at the Watertown Arsenal he could become sufficiently master of the system as to install it in its entirety at the Rock Island Arsenal, but he has been able to carry away enough to keep the arsenal staff well employed for nearly two years in putting what he learned into effect.

At the Watervliet Arsenal similar effort has been made, but there was some disadvantage to this arsenal from the fact that the visiting officer had to leave the department through the expiration of his detail a few months after he had returned from the Watertown Arsenal. Watervliet also labors under the disadvantage of inability to compare the cost of its product with the price of private manufacturers, since the field and seacoast cannon which it constructs are not now procured from private sources, the work of the department not being sufficient to keep the arsenal going to such an extent as would be desirable.

The Springfield Armory also uses in its very efficient manufacture many of the principles of the Taylor system, although they were not obtained from Mr. Taylor or his experts, but have been applied through many years, and lately at an increasing rate, by the officers of the armory. The principal output of the armory, the caliber .30 rifle, is believed to be made with remarkable economy; but here again the most satisfactory comparison possible, namely, that with the cost of outside production, is not available, since the Government makes all of its own rifles. The manufacture of automatic pistols has, however, just been inaugurated at the armory, and in the course of a year it will be possible to make comparison of its cost with the price which is paid private manufacturers.

Operations at the Watertown Arsenal had been going on with remarkable smoothness since my last annual report, when, in June last, two petitions signed by something over 300 of its workmen were presented, asking the discontinuance of the system. The features objected to were those relating to time study and the premium system of payment. A number of complaints were instanced, but these were of such trivial and unsound nature and were so easily answered that it seems difficult to believe that they furnished the real basis for the number of signatures that were appended to the petitions. The petitions were addressed to the Secretary of War, and I have dealt with them in a memorandum which accompanies this report as *Appendix I. I will not attempt to give even the substance of the memorandum, but will state its conclusion that I believe this apparent opposition to be artificially worked up by a few discontented employees, with the assistance of influence outside the arsenal, and I have recommended that the subject be investigated by the Commission on Industrial Relations appointed by the President under the act approved August 23, 1912. The War Department has accepted my recommendation and has taken steps to induce the commission to make the investigation referred to.

When, nearly two years ago, the extension of the systemization features of the Taylor system from the Watertown Arsenal to the Rock Island Arsenal was undertaken it met with strenuous opposition from a number of the employees, which opposition was fostered and to a certain extent led by officials of labor organizations outside the arsenal. Some of these officials went to the vicinity of the arsenal and used their efforts to prevent the installation of the system. Labor representatives in Washington also exerted their influence against it, and political pressure was resorted to. The opposition took the form of a stand against what is known as the "job card," which is a ticket upon which is noted the name of the job upon which a workman is employed, the name of the workman, the designation of the machine to be used, the time of starting on the job, the time of finishing it, and a few other items of information. Its object is to secure accurate record of the time required to do the work and of certain other facts, such as its inspections, etc., in order that its cost may be properly charged to the order to which it belongs, which often includes a large number of just such jobs. The opposition to the card was as the beginning of the Taylor system, whose introduction it was intended to forestall at its inception. It was not yielded to; but careful explanation of the object of the card was made, and of the fact that it had nothing to do with the subject of wages, but was intended to promote accuracy of cost keeping, and its use was insisted upon. No trouble followed, or has followed since, and the employees have learned from experience that neither this nor any other part of the system which has been introduced contains any element to their disadvantage, as was fully explained to them in the beginning.

SURPLUS MATERIAL.

In my last annual report I made reference to the savings resulting from the use of old material, which had been purchased in excess of requirements under former manufacturing orders, and some of which also had been turned in as scrap from the service, which amounted to something over $122,000. As there stated this supply of material

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* Omitted.

arose from the practice of making purchases from the allotment of funds made to carry out each manufacturing order, of the material estimated to be necessary to carry it out. As it was impossible to estimate accurately in advance, the natural result of overpurchase followed, and the material left over, not being systematically disposed of as manufacturing stock, of which no general supply was authorized or contemplated by the then system, in time was lost sight of and remained stored in out-of-the-way places. Similarly material, such as old cartridge cases turned in from the service, was used in the manufacture of new stores without any definite account being taken of its value and accounting for it made. Systematic attention to this subject has continued during the fiscal year just elapsed, and the saving resulting has amounted to three or four times that reported last year, the larger part having arisen at the Frankford Arsenal. Owing to the great press of other clerical work the amount of these savings, although recorded, has not been gathered up and made ready for presentation, but it is possible to say that it is in the hundreds of thousands of dollars.

CASH REWARDS FOR EMPLOYEES.

In my last annual report I referred to the passage of an act which authorized the payment of cash rewards for the most valuable suggestions submitted by employees, and of the necessary instructions having been issued for putting the act into effect. October 1 to December 31, 1912, was designated as the first quarterly period within which rewards might be won. Up to the end of the fiscal year three periods had elapsed. The number of suggestions considered meritorious and the amounts paid each quarter are shown below:

Period.	Number of meritorious suggestions reported during quarter.	Amount paid during quarter.
Oct. 1 to Dec. 31, 1912	3	$38.46
Jan. 1 to Mar. 31, 1913	4	49.00
Apr. 1 to June 30, 1913	5	61.00
Total	12	148.46
Average amount paid per suggestion		12.37

It will be noted that the number of cases reported and the amount paid increased each succeeding quarter, and it is expected that there will be further increases as the working of the act becomes more generally known, with corresponding benefit to the department in improved methods and output. The amount which has been paid is not as great as was anticipated, but the stimulating effect can not be other than good. In the meantime there is some satisfaction in noting that the act has not produced a tendency to run away with the subject, and to make awards under conditions not justifying them.

OPERATION OF LIABILITY ACT.

The act providing for the compensation of employees injured while at work was approved on May 30, 1908. It requires an absence, as a result of injury, for at least 15 days before compensation is paid, after which full wage is paid during the period of disability up to one year. These provisions have the disadvantage of permitting unnecessary extension of the time absent so as to make it as much as 15 days when the injury itself would not justify it, and also of failing to furnish an incentive for returning to work as soon as the employee's condition would permit. The table below gives some figures brought out by the operation of the act:

Year.	Total injured.	Absent on account of injury.							Amount paid on account of disability.	Total number of employees.
		Total.	0 to 5 days.	5 to 10 days.	10 to 15 days.	15 to 20 days.	20 to 25 days.	25 days and over.		
1909...........	286	236	87	33	13	44	13	46	$3,714.70	6,628
1910...........	372	284	78	37	19	47	39	64	11,541.15	6,037
1911...........	518	326	115	29	12	47	43	80	15,218.85	5,444
1912...........	612	358	131	29	11	65	43	79	15,865.99	5,317
1913...........	800	441	178	44	17	64	48	90	18,376.30	5,305
Total...	2,588	1,645	589	172	72	267	186	359	64,716.99	....

It will be observed that the number reported injured and the number absent on account of injury have increased progressively from 236 so absent in 1909, the first year after the passage of the act, to 441 in 1913. It also appears that the number who were out for as much as 10 days and who then returned within 15 days has been quite small, while the number out 25 days and over increased from 46 in 1909, when the total number of employees was 6,628, to 90 in 1913, when the total number of employees was 5,305. The amount paid on account of disability also increased from $3,714.70 in 1909 to $18,376.30 in 1913. The years named are fiscal years.

I think that a system of safeguarding employees from bearing the whole burden of loss which results from their injury is wise as well as just; but I see no reason for lifting the entire burden from them and placing it on the employment; nor do I see any reason for requiring that they shall bear the entire burden unless the loss of time amounts to as much as 15 days. I think that the law might be improved by changing it so that payment for time lost through injury would commence concurrently with the loss of time, and that the payment should not be full payment, but should leave upon the employee the burden of such a portion of the time lost as he would not like to bear, and which would constitute an incentive for him to make the time as short as possible. For example, the payment of 60 per cent of the wages from the time of the occurrence of the injury necessitating absence from work, continued under the same conditions as to length of time as at present, would avoid the objections here stated.

EXAMINATION AND SETTLEMENT OF ORDNANCE PROPERTY RETURNS.

The work of examination and settlement of property returns during the fiscal year is set forth in the following table:

Returns.	On hand July 1, 1912.		Received during fiscal year 1913.	Examined during fiscal year 1913.	Settled during fiscal year 1913.	On hand June 30, 1913.	
	Unexamined.	Examined and not settled.				Unexamined.	Examined and not settled.
Arsenals:							
First division	2	18	27	25	28	[1] 4	15
Second division	....	1	27	27	27	....	1
Inspectors of ordnance	....	....	21	21	19	....	2
Coast artillery	....	21	586	583	529	[2] 3	75
Field artillery	....	52	164	164	157	....	59
Cavalry	1	40	681	681	541	[2] 1	180
Infantry	1	151	1,386	1,386	1,443	[2] 1	94
Artillery districts	....	9	60	60	64	....	5
Forts and posts	1	79	534	532	547	[1] 3	64
Surgeons	1	18	499	500	504	....	14
Philippine Scouts	....	26	120	119	128	[2] 1	17
Submarine mine property	....	8	114	114	98	....	24
Militia	....	12	48	48	44	....	16
Colleges	....	7	212	212	210	....	9
Individual horse equipments	1	35	4,930	4,931	4,905	....	61
Miscellaneous	....	17	538	538	541	....	14
Total	7	494	9,947	9,941	9,785	13	650

[1] Received too late to complete examination before end of fiscal year.
[2] Examination prevented by nonreceipt of preceding returns.

The amounts which the audit of property returns showed as due the Government, and the collection of which was assured and obtained by that agency during the past fiscal year, are tabulated below:

Collected from officers of the Army	$3,087.90
Collected from enlisted men	24,365.78
Paid by States	231.51
Paid by educational institutions	12,124.62
Paid by transportation companies	1,787.83
Paid by executive departments, etc	283.04
Total collected	41,880.18

COST OF MAINTENANCE OF THE ORGANIZATIONS OF THE SEVERAL BRANCHES OF THE LINE OF THE ARMY.

The records of the cost of maintenance in ordnance equipment of organizations have been kept during the past year under the same headings as given in my last annual report. The amounts given in these records of the cost of maintenance cover the value of all ordnance property expended (except the value of ammunition expended in target practice), lost and not charged for, lost through desertion of soldiers, condemned and destroyed, condemned and sold (less 10 per cent allowed for the value of material sold), and condemned and turned in (less 10 per cent allowed for the value of the material turned in).

Table I shows, first, the five organizations in each branch of the service whose cost of maintenance has been least, followed in each case by the five organizations in the same branch of the service the cost of whose maintenance has been greatest, arranged in the order determined by the total cost of maintenance of each for the three calendar years of 1910, 1911, and 1912.

As the cost of each organization for another year is added to its cost for the two preceding years, the average annual cost approximates closer to the true cost of maintenance than the data submitted in my previous reports.

TABLE I.

Engineers.			Signal Corps.			Cavalry.						Field Artillery.					
Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Regiment.	Amount.	Order of cost of maintenance.	Troop and regiment.	Amount.	Order of cost of maintenance.	Regiment.	Amount.	Order of cost of maintenance.	Battery and regiment.	Amount.
1	D.....	$701.39	1	C.....	$28.47	1	9th......	$38,820.45	1	H, 9th...	$2,262.27	1	4th....	$27,356.28	1	A, 4th.....	$3,440.59
2	G.....	1,160.38	2	G.....	45.66	2	14th.....	51,862.68	2	G, 9th...	2,413.24	2	2d.....	54,945.12	2	C, 4th.....	4,018.45
3	C.....	1,236.40	3	K.....	83.30	3	4th......	53,005.56	3	M, 9th...	2,414.35	3	5th....	56,779.32	3	E, 4th.....	4,557.49
4	B.....	1,471.76	4	H.....	119.22	4	10th.....	54,755.07	4	E, 10th..	2,501.48				4	F, 4th.....	4,726.46
5	H.....	1,512.90	5	F.....	130.41	5	11th.....	57,650.26	5	L, 14th..	3,004.32				5	D, 4th.....	4,948.06
8	L.....	1,792.92	6	A.....	2,626.33	11	15th.....	65,345.59	176	C, 8th...	8,033.48	4	6th....	72,220.92	32	C, 1st......	17,206.50
9	A.....	1,918.29	7	L.....	3,018.83	12	13th.....	68,925.51	177	E, 15th..	8,036.90	5	3d.....	84,943.12	33	B, 1st.....	17,215.59
10	I.....	3,587.16	8	D.....	3,270.73	13	2d.......	71,205.93	178	D, 5th...	8,412.22	6	1st....	94,331.37	34	F, 6th.....	17,268.46
11	M.....	5,593.39	9	I.....	3,663.02	14	8th......	71,313.46	179	K, 7th...	8,421.95				35	A, 1st.....	18,172.17
12	K.....	8,923.30	10	E.....	4,542.42	15	7th......	73,205.92	180	F, 8th...	9,291.78				36	F, 3d......	23,620.36

Coast Artillery Corps.			Infantry.						Porto Rico Regiment.			Philippine Scouts.		
Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Regiment.	Amount.	Order of cost of maintenance.	Company and regiment.	Amount.	Order of cost of maintenance.	Company.	Amount.	Order of cost of maintenance.	Company.	Amount.
1	37th........	$46.40	1	25th.........	$8,696.90	1	D, 16th......	$197.54	1	E...........	$857.84	1	49th.........	$482.99
2	93d.........	47.03	2	16th.........	9,662.74	2	M, 22d......	252.44	2	C...........	1,204.87	2	32d..........	504.84
3	108th.......	60.19	3	10th.........	10,117.32	3	H, 16th......	274.53	3	A...........	1,359.76	3	51st.........	813.40
4	132d........	63.98	4	22d..........	10,961.77	4	F, 22d......	297.52	4	F...........	1,679.90	4	42d..........	819.18
5	97th........	67.83	5	24th.........	11,069.20	5	L, 29th......	305.09	5	B...........	1,724.61	5	31st.........	825.27
166	162d........	889.97	26	23d..........	18,108.74	356	M, 8th......	2,593.31	6	G...........	1,885.05	48	33d..........	2,574.79
167	22d.........	893.49	27	27th.........	20,305.23	357	I, 13th......	2,726.25	7	D...........	1,972.41	49	6th..........	2,629.56
168	41st........	923.36	28	13th.........	20,550.39	358	C, 8th......	2,787.02	8	H...........	2,108.35	50	2d...........	3,065.81
169	70th........	1,073.65	29	8th..........	20,599.49	359	A, 17th......	2,874.27				51	50th.........	3,276.70
170	111th.......	2,027.68	30	30th.........	20,882.13	360	D, 30th......	3,128.11				52	44th.........	3,492.81

Taking the several branches of the service in the order in which they are listed, it will be seen that Company H of the Engineers, which was No. 1 on the list for the two preceding years, has dropped to No. 5 in the order of cost of maintenance, and Companies D, G, and C have advanced from Nos. 2, 3, and 4 to Nos. 1, 2, and 3, respectively. Companies I, M, and K, which were Nos. 10, 11, and 12 last year, retain those places.

In the Signal Corps, Companies B and M, having insufficient ordnance property in their possession to make a comparison of their cost of maintenance fair to other like organizations, are omitted from the list. Each of the companies, except A and L, which exchanged places Nos. 6 and 7, retains its position of last year.

In the Cavalry, the Ninth Regiment retains first place for the second consecutive year; the Thirteenth and Second Regiments advance from thirteenth and fifteenth to twelfth and thirteenth places, respectively, while the Fourth and Eighth Regiments drop from second and fourth to third and fourteenth places, respectively. The Seventh Regiment, which was in tenth place last year, now goes to the bottom. The Fourteenth, Tenth, Eleventh, and Fifteenth Regiments, which were in sixth, eighth, seventh, and ninth places last year, are now in second, fourth, fifth, and eleventh places, respectively. Among the troops, H of the Ninth and D of the Fifth advance from second and one hundred and eightieth places to first and one hundred and seventy-eighth places, respectively; M of the Ninth retains third place; the other troops, with F of the Eighth at the foot, held places 103, 170, 151, and 120, respectively, last year; C of the Eighth and F of the Eighth each shows an appreciable increase in cost of maintenance.

In the Field Artillery, each regiment retains its position, except the Third and First, which exchange places. The first five batteries belong to the Fourth Regiment. A and C have each gained one place, E two places, C of the First four, and B of the First one place; A of the First retained its place; D of the Fourth, which was first last year, goes to fifth place. F of the Fourth, F of the Sixth, and F of the Third, which are now shown in the list, held the sixth, twentieth, and thirty-first places, respectively, last year. B of the Fourth and A of the Third, which held the fourth and thirty-third places last year, are now in the seventh and thirtieth places, respectively.

In the Coast Artillery, two of the organizations of those named last year remain in the table for this year. The Thirty-seventh Company retains first place, and the One hundred and eleventh goes from one hundred and sixty-ninth to one hundred and seventieth in place of the Thirtieth Company, which is now in forty-eighth place.

In the Infantry, the Tenth and Thirtieth Regiments retain their positions. The Twenty-fifth Regiment advances from second to first, and the Twenty-second Regiment falls from first to fourth place; the Sixteenth, Twenty-third, and Twenty-seventh Regiments each gains two places. The Nineteenth, Fourteenth, and Seventeenth Regiments, which held the fifth, twenty-sixth, and twenty-seventh places last year, are now in the tenth, twenty-second, and twenty-fourth places, respectively.

Among the Infantry companies named last year, A of the Seventeenth and D of the Thirtieth retain their positions as Nos. 359 and 360, and H of the Sixteenth gains one place. B and E of the Twenty-second, which are succeeded by D of the Sixteenth and M of the Twenty-second for the first two places, are now Nos. 186 and 199 on the list, showing a considerable increase in cost of maintenance of each organization.

In the Porto Rico Regiment, E and H retain their places as first and last on the list. G and D drop from second and third to sixth and seventh places, respectively, while each of the other companies advances two places.

In the Philippine Scouts the Forty-ninth Company carries first place for the third time. The Second Company, which was No. 52 last year, advances two numbers, making way for the Forty-fourth Company, which is succeeded in fifty-first place by the Fiftieth Company losing two places. The Forty-eighth, Fifteenth, Fifty-second, and Twentieth Companies, with increased cost, have dropped to thirty-second, eleventh, eighteenth, and tenth places, while the Tenth and First Companies, with slight increases, have advanced to forty-first and forty-sixth places, respectively.

TABLE II.

Branch of service.	Average annual cost of organization, 1910, 1911, and 1912.	Average cost per regiment.
Engineers	$871.85 per company	
Signal Corps	$486.92 per company	
Cavalry	$1,710.08 per troop	[1] $21,301.35
Field Artillery	$3,616.43 per battery	[2] 23,894.80
Coast Artillery Corps	$98.86 per company	
Infantry	$403.77 per company	[2] 5,153.57
Porto Rico Regiment	$533.03 per company	4,461.55
Philippine Scouts	$492.19 per company	

[1] Includes headquarters, machine-gun platoon, and miscellaneous.
[2] Includes headquarters and miscellaneous.

A comparison of the figures in Table II with those of last year shows an increase in the average cost per organization of Signal Corps, Coast Artillery Corps, Porto Rico Regiment, and the Philippine Scouts for the three-year period, and a decrease in the Engineers, Cavalry, Field Artillery, and Infantry. By regiments there is a decrease of $921.16 for the Field Artillery and a slight increase for the other regiments.

As the same organizations have not been stationed in the island possessions during the entire three-year period, the data corresponding to those contained in Tables III and IV of my last annual report are omitted. Table III illustrated the great difference in cost of maintenance between organizations of the same branch of service under similar climatic conditions, first in the United States and Alaska, and second in the Philippines and Hawaii; and Table IV showed the comparative average cost of maintenance of troops on the continent and in the island possessions of the United States; that is, under different climatic conditions, over a period of two years. However, a comparison of the maximum and minimum costs of maintenance of like organizations serving in the islands during the years 1911 and 1912 indicates no appreciable increase or decrease in such costs.

CHANGES IN METHODS OF ACCOUNTING FOR PROPERTY.

Horse equipments issued to officers.—Horse equipments which have been heretofore accounted for by each officer on individual returns will hereafter be issued to officers serving at posts on memorandum receipt, by post ordnance officers. This should reduce materially the number of the small returns to be examined by this office without any loss in the accuracy of accounting for such stores.

Returns from post ordnance officers.—Instructions have been issued requiring that only one return be rendered to cover accountability during each entire semiannual period for the ordnance property at each post for which the post ordnance officer is accountable, instead of having a separate return made by the transferring officer in each case where a transfer of property from one officer to another occurs within the accounting period, as was previously required to be done. All complete transfers of property made within the period will be shown on the one return, supported in each case by the certificates of the transferring and receiving officers, and similar instructions have been issued to cause like action in the case of all returns of submarine mine property made by the coast defense artillery engineers. These changes will also reduce the number of returns to be handled by this office, and as this method has worked satisfactorily in the case of artillery district ordnance officers, it is expected that it will work satisfactorily when applied as stated above.

Returns from organizations.—To reduce the paper work of organizations of the Army that have heretofore been required to account in detail for all property received and disposed of, Unit Accountability Equipment Manuals have been prepared for practically all organizations, which give in detail the quantities and kinds of all ordnance property that each should take into the field.

Their returns hereafter will simply state that they have on hand the property prescribed by the manual. They are required to state their surpluses and shortages, if any, but it is hoped that organization commanders will take care at all times to keep on hand the exact quantities of the stores prescribed in these manuals, and especially as the accounting time approaches, in order that long lists of surpluses and shortages need not be attached to the return.

This method of accounting will go into effect January 1, 1914, and the first return under it will be rendered June 30 of that year. It is hoped that in addition to lessening the paper work of organizations it will eventually reduce the work of this office in connection with checking returns. It is difficult, in advance of actual trial, to determine either point.

Ordnance property used by organizations in garrison and not required for field service will, after January 1, 1914, be accounted for by post ordnance officers and issued to organizations on memorandum receipts.

ORDNANCE EQUIPMENT OF MOBILE ARMY FOR WAR.

The small arms, except some revolvers, and the personal equipments for the recruits necessary to bring the regular organizations from peace strength to war strength are stored at the recruit depots, so that in case of emergency recruits may be armed and equipped thereat before joining their proper organizations.

The arms, equipments (personal and horse), ammunition, and miscellaneous articles for the different branches of the service required for the proper equipment of the number of volunteers that it is anticipated will be raised in case of war with a first-class power (in addition to the Organized Militia as armed and equipped) are on hand at arsenals or depots, under manufacture, or to be manufactured under appropriations now available, with the following exceptions:

(*a*) *Cavalry:* A large number of horse equipments are still required to complete the equipment of cavalry troops. The shortage in horse equipments is due to the fact that pending the adoption of new equipment no considerable number of such equipments have been manufactured in recent years, and the supply on hand has been largely decreased. As the tests preceding the adoption of the new model of equipment have been completed and the modified equipment approved, the manufacture of the necessary number of horse equipments to make up this shortage has been undertaken. The deficit in these articles can be rapidly made up if sufficient funds are appropriated for the purpose.

(*b*) *Field Artillery:* Of the 264 batteries required for the mobile army of 450,000 officers and enlisted men in continental United States in case of war with a first-class power, the necessary number of field guns, carriages, limbers, and equipments for only 188 batteries are now in the possession of the Regular Army or Organized Militia, in ordnance establishments, under manufacture or to be manufactured under appropriations now available, with the exception of a number of bolos and scabbards and a number of horse equipments for the individually mounted men. The amount of ammunition on hand for the field guns is far short of that considered desirable. No permanent ammunition trains have been provided.

(*c*) *General war plans:* The plans of the Ordnance Department in case of a war with a first-class power have been published in Ordnance orders. These plans provide for complete arrangements for the accumulation of reserve ordnance and ordnance stores as far as the appropriations will permit, as shown above; for the distribution of these reserve supplies to designated arsenals, each covering an ordnance supply district; for the acceleration of the procurement of the remaining supplies needed; for quick or automatic issue of the ordnance equipment of all kinds required to raise the organized troops to field strength and for the volunteers; for ordnance depots for maintaining in the field for six months each Infantry and Cavalry division of the proposed force; and for the necessary telegrams and letters, ready for signature, for putting in motion the various agencies of the department for accomplishing the above and other necessary objects. The plans are based upon the approved plans of the War Department and have been actually carried out to a large extent except, as noted above, as to horse equipments and field artillery, especially its ammunition.

SMALL ARMS.

Semiautomatic shoulder rifle.—Tests of semiautomatic shoulder rifles, designed by this department and submitted by private individuals, have been continued during the past year. The department's endeavors to encourage private individuals in their work of designing such a rifle have met with some success. Several requests for tests of rifles along the type desired have been received, showing that an interest is being taken in the matter by inventors. One of the rifles tested, while not developed sufficiently to warrant adoption for use in the military service, has shown promising results.

Automatic pistol, caliber .45, model of 1911.—A sufficient number of automatic pistols have been delivered to properly equip all regular troops serving in the United States, Hawaii, Panama, and Alaska, and general issues thereof have been made to the Infantry, Coast Artillery Corps, Signal Corps, Field Artillery, and Engineers, and are now being made to the Cavalry.

The sum of $300,000 appropriated by Congress by the act dated March 3, 1911, for the purpose of procuring automatic pistols, etc.. for the Organized Militia enabled this department to procure 16,110 pistols and pertaining equipments, and that number of such articles are now practically on hand available for issue to the Organized Militia. Issues to the Organized Militia of these articles have begun, and will continue until such time as the articles procured for such purpose shall be exhausted; but the number procured is not sufficient to fully equip the organizations of this arm of the service by several thousand pistols.

The Springfield Armory has established a plant for the manufacture of the automatic pistol, and manufacture thereof has been inaugurated at that armory.

Cavalry sword and scabbard.—A new sword and scabbard for officers and enlisted men of Cavalry organizations have been adopted. The sword has a double-edged straight blade 35 inches in length, the guard and gripe being modeled after the design recommended by the Cavalry Equipment Board. The body of the scabbard for enlisted men and for officers in the field is made of hickory, covered with rawhide and tubular webbing, with a metal tip. A nickel-plated scabbard has been adopted for use of officers for dress occasions and for use in garrison.

The manufacture of these swords and of officers' scabbards has been undertaken at the Springfield Armory, and that of the scabbards for enlisted men at the Rock Island Arsenal. It is expected that a sufficient number will be manufactured to enable issues to be made to cavalry organizations in the near future.

A chain sling to replace the present dress sling has been adopted for the use of officers in carrying the new sword and steel scabbard. No means are provided for carrying the new sword and scabbard for enlisted men when dismounted, as those articles of equipment will be habitually carried on the saddle.

Infantry equipment, model of 1910.—The manufacture and purchase of Infantry equipments of the new design (model of 1910) are proceeding satisfactorily. Such equipments have been issued to 14 regiments of Infantry and certain Engineer troops. In reports received from the troops who have had the equipment in their possession for some time it is stated that the equipments have been, in general, satisfactory. The field tests have shown that certain minor changes would improve a few of the articles, and the recommendations made in this respect have been carried out as far as practicable.

This department has in store, or under manufacture or purchase, approximately 125,000 sets of Infantry equipment of this new design.

Approximately 9,000 sets of such equipment were destroyed in a fire at the Benicia Arsenal. An estimate was submitted to Congress for funds to replace the stores destroyed, but so far favorable action thereon has not been taken.

A small number of woven-web gun slings have been procured from a private manufacturer and issued to three companies of Infantry and the School of Musketry for test for one year in order to determine their serviceability in comparison with the leather gun sling.

Proposed new Cavalry equipment.—The Cavalry Equipment Board recommended that new designs of personal and horse equipments for the Cavalry be adopted, but that certain field tests be made in order that any minor defects developed in the equipments might be overcome before the general manufacture thereof was undertaken.

To comply with this recommendation, which was approved, sufficient equipments were manufactured for Troops B and D of the Eleventh Cavalry, stationed at Fort Oglethorpe, Ga., which were issued to those troops early in October, 1912. The tests continued from that time and were completed about June 30, 1913. Slight modifications were recommended in a few articles. These modifications have been completed and a set of equipments was submitted and approved by the War Department. Orders have been given for the manufacture of a limited quantity of these equipments, and further orders will be given when funds become available.

A halter tie rope has been adopted for use in lieu of the halter strap, and issue thereof is being made to troops.

The saber knot for enlisted men recommended by the Cavalry Equipment Board has been adopted.

Range finder for Infantry and Cavalry.—The tests of range finders at the School of Musketry have been continued throughout the year. It is expected that these tests will be completed during the coming year, at which time action will be taken with reference to the adoption of a range finder for Infantry and Cavalry to replace the Weldon range finder, with which these troops are at present equipped, but which is not entirely satisfactory.

Fencing equipment.—Experiments to determine the advisability of adopting new outfits for bayonet fencing have been continued throughout the year. The tests of the bayonets at the School of Musketry have not yet been completed.

Electrically operated targets.—Two Ellis self-scoring targets were purchased, one of which is installed at Fort Myer, Va., and the other at the District of Columbia National Guard rifle range. During their test some minor defects developed in these targets, but as a whole the results obtained were very promising. Since the installation and test of these targets instructions were received from the Secretary of War to purchase 9 such targets, namely, 3 targets "A" (200 and 300 yards range), 3 targets "B" (500 and 600 yards range), and 3 targets "D" (for rapid fire and skirmish fire), and to install one of each of the three different styles of targets at each of the following-named posts: Fort William McKinley, Rizal, P. I.; Fort Sam Houston, Tex.; and Fort Sill, Okla.

Galveston, Tex.—An officer of this department was assigned to duty as chief ordnance officer at the port of embarkation, Galveston, Tex., upon concentration of the Second Division in that vicinity. A limited number of small stores, such as spare parts, cleaning materials, etc., and also such stores as were necessary for the proper equipment of the troops of the division, were kept on hand. Such stores as were not on hand at Galveston were issued from the San Antonio Arsenal. Under the above method the promptness and completeness of the supply of ordnance and ordnance stores to the troops of the Second Division have been generally satisfactory.

GUNS AND MORTARS.

Installed armament.—Reports from armament officers and from artillery sources indicate that the guns and mortars mounted in the seacoast fortifications have been maintained in a satisfactory state of efficiency during the year. The principle of making arsenal commanders responsible for the inspection, repair, and alteration of the armament on the coasts in the general region of their establishments has produced very satisfactory results.

Erosion.—The advantage in greatly increased accuracy life predicted in my report for the year 1906 from the adoption of a large-caliber low-velocity gun in lieu of one of smaller caliber and high velocity with equal armor-penetrating power has been realized in extensive firings made with a service 14-inch gun. The results in firing 123 rounds from a 14-inch 2,150-feet-per-second gun indicate that its accuracy life will be approximately four times that of the 12-inch 2,500-feet-per-second gun which it was designed to supersede. The department is continuing its general investigation of the cause of erosion and its search for means of further prolonging the accuracy life of cannon.

Heat cracks in cannon.—An examination of the metal removed from the inside of badly eroded seacoast cannon while being bored out for the insertion of a lining tube has indicated the presence of heat cracks to such an extent as to justify the use of the double tube employed in all 14-inch seacoast guns with a view to preventing the spread of the heat cracks beyond the limits of the liner. Photographs of rings of metal taken from various parts of the bore of a 12-inch gun that had been fired 239 rounds, together with the results of tests of such metal, are exhibited in *Appendix II of this report.

The presence of the lining tube is further advantageous in that it facilitates the work of relining by making it possible to drop the original liner out of the gun by merely flowing cold water through the bore after the gun and liner have been moderately heated.

Gun construction.—The gun factory at the Watervliet Arsenal, in so far as concerns the production of large-caliber guns and mortars, has been running at something more than its eight-hour capacity during the past year, two and even three shifts having been employed on some of the work. The output has included Navy guns, both new and relined, in addition to Army guns and 12-inch mortars. The wire-wrapped type of construction employed for all Army guns and mortars of 6-inch caliber and greater has continued to give excellent satisfaction both as regards cost and efficiency.

New design of 12-inch mortar.—A number of the more powerful 12-inch mortars of new design referred to in my last annual report as being under manufacture for the fortifications of the Panama

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* Omitted.

Canal have been completed and successfully tested. They will have a maximum range of slightly more than 11 miles, as compared with approximately 8½ miles for the most powerful type previously in use.

Damage to 14-inch gun.—During the proof firing of one of the new types of 14-inch guns at the Sandy Hook Proving Ground, on December 9, 1912, the rear end of the jacket or outer cylinder gave way, releasing the breech bushing, carrying with it the breechblock. As this accident caused considerable comment in the public press, as indicating a possible general weakness in our seacoast defense guns, the following facts in reference thereto are presented:

The weakness resulting in the accident was found to have been due to the presence of a cut made in the jacket to accommodate a part of the breech mechanism. It arose from modifications in the design with a view to reducing the weight of the breechblock, thus increasing the speed of operation. The trouble occurred with a type of gun of which only four were under manufacture, and does not involve any of the older guns or any of the other models of the newer ones. The design has since been modified to eliminate the cut. The damaged gun is being repaired at moderate expense, as it was not injured beyond the loss of the outer cylinder at the rear end.

Fort Moultrie accident.—A deplorable accident at Fort Moultrie, S. C., on May 22, 1913, caused the death of one officer and three enlisted men of the Coast Artillery. The accident occurred through the premature discharge of a 3-inch (15-pounder) gun during night target practice. The appearance of the recovered parts of the mechanism, and the testimony of surviving members of the gun detachment, establish the fact that the accident was due to the breakage of a small part of the firing mechanism—the firing-pin guide—which normally serves to withdraw and retain the point of the firing pin within the face of the block when open. The breakage resulted in the pin projecting from 0.05 to 0.15 of an inch beyond the face of the block and thus permitted it to strike and fire the primer when the block was being closed.

The evidence indicates that the breakage occurred approximately a month before the fatal accident, and that the resulting presence of the protruding firing pin was known to at least three sergeants and two corporals of the gun detachment concerned, or of another detachment which occasionally drilled at that piece. The evidence does not clearly establish the fact that any of the officers of the company concerned were aware of the protruding firing pin, but that trouble with the mechanism was reported to two of them that should have reasonably put them on inquiry and led to the detection of its condition. The responsibility of the various persons concerned is expected to be determined by the Inspector General's Department, to which the case has been referred.

The mechanism was of a type that was exhaustively tested at the proving ground and has been in service approximately 10 years, without a previous indication of any defect which might lead to an accident.

In order to keep the armament in good condition and prevent accidents of this character, one or more skilled machinists are kept by this department in continuous employment, under the supervision of local Artillery officers, at the fortifications in each harbor. Provision is made for an inspection twice a year by an officer of the Ordnance Department, at which special attention is given to the condition of the safety devices. This gun was inspected approximately two months before the accident and was found in good condition. The Coast Artillery instructions further require that guns shall be carefully inspected by the Artillery commanders within 10 days prior to target practice, which inspection appears not to have been made in this case.

Steps have been taken, both by the Coast Artillery authorities and by this department, to prevent recurrence of an accident of this character.

Loading tray for rapid-fire guns.—It having been found necessary to ream out the gas-check seats of a number of rapid-fire guns in service in order to remedy the damage arising from accidental blows from projectiles in loading, a loading tray in the form of a hollow cylinder, through which the projectile is passed without danger of injury to the gas-check seat, has been provided for all 5-inch and 6-inch rapid-fire guns to which troops are assigned. A cannoneer standing at the left of the breech of the gun operates the tray by means of a long handle projecting from one side. The tray has been found to effectively protect the gas-check seat without materially reducing the rapidity of loading, although its use requires an extra man in the gun detachment.

Gun-forging plant at Watertown Arsenal.—There is being installed at the Watertown Arsenal a forging press of sufficient capacity to enable the department to take up the work of manufacturing the forgings used in the construction of mobile guns and howitzers. On account of the excellent facilities at that establishment for the manufacture and test of steel, it is hoped that improvement in the quality of gun steel may result from the undertaking of its manufacture there. The work will also enable the department to secure accurate data as to the cost of manufacture, and by enabling it to manufacture its own gun forgings, if reasonable prices are not quoted by bidders, may result in the lowering of bids for such material.

Safety device for seacoast cannon.—In order to increase the safety of seacoast cannon using separate loading ammunition a safety-bar latch has been devised and is being added to all such cannon in service, whereby the safety-bar slide will be more positively held in engagement with the firing leaf during the time the breechblock is open or being rotated into the locked position.

Gas-check pads.—Experiments have indicated that the life of the gas-check pads used in seacoast cannon can be greatly prolonged by coating them with a mixture of cosmic and graphite. This material tends to exclude moisture and to reduce the adhesion of the pad to the metal parts of the system. All pads are now being molded under higher pressure than that heretofore used, the change being for the purpose of preventing deformation under the high pressure to which they are subjected in the cannon.

Through a change in the position of the shoulders supporting the split rings, whereby they are placed under the rings, thus leaving a smooth surface at the inner edges, a further increase in the life of gas-check pads is being secured. A change has also been made in the filling material of the pads, the new material having less tendency to absorb moisture in storage and thus to increase in size.

Searchlights for examining the bores of cannon.—In order that the bores of cannon may be thoroughly inspected there has been developed and issued for use in each armament district a searchlight device consisting of a mirror of moderate magnifying power, equipped with electric lights and suitable shades. The whole is mounted on a fixture fitting the bore of the gun and is provided with a long staff for sliding it through. By means of a pair of moderate-power field glasses a good view can be obtained of the surface of the bore. Photographs taken by the aid of this device have been found to bring out small details and to be useful in studying suspected defects.

Subcaliber guns for mobile artillery.—There has been developed for use with mobile artillery, especially with the larger-caliber howitzers, a 1-pounder subcaliber gun and an explosive projectile containing a bursting charge of black powder or other smoke-producing material sufficient to make the point of impact clearly visible. By means of a subcaliber gun of that character it is expected to secure valuable training in the operation of the piece and in the conduct of fire without the expenditure of so much of the more expensive service ammunition.

Effort is being made to obtain greater uniformity in ranges than has been customary with this caliber of gun in the past. With this in view a heavier projectile is being tested. If it proves satisfactory, it will permit the carrying of a larger bursting charge and thus advantageously increase the visibility of burst.

GRENADES.

Simulated bursts of shrapnel.—Devices of the nature of smoke grenades, referred to in my last annual report as having been developed for use in field artillery exercises, have been further perfected and their use greatly extended. A rifle-grenade type of the device permits securing great variations in height of burst, while the less expensive pole type permits satisfactory training in the other features of observation of fire. These devices have been found to give excellent preliminary training to officers in the observation and control of fire without the expenditure of the more expensive service ammunition.

SMOKELESS POWDER.

Powder board.—The Joint Army and Navy Board on Smokeless Powder, consisting of officers of this department and of the Navy Bureau of Ordnance, has continued its work during the year, with a view to improving the quality and cheapening the cost of manufacture of smokeless powder. No important change has been made in the specifications, although a few changes of minor importance have been recommended and adopted. Improvement in the product and increased economy in the manufacture of powder have accompanied the year's work.

Regulations for care and test of smokeless powder.—An important set of regulations for the care and test of smokeless powder and other explosives at ordnance establishments and in service was published during the past year. With a view to insuring satisfactory storage conditions and the safety of personnel, these regulations prescribe in great detail the storage conditions, and provide for frequent observation and test of the smokeless powder and other explosives in store. Provision is made for a monthly test, by a local artillery officer, of a small sample of each lot of powder in each magazine. In order that the samples may accurately represent the condition of the powder in the charges in storage, fresh ones are taken every six months from separate loading ammunition and every year from fixed ammunition; the powder in the latter class of ammunition being better protected and the obtaining of a sample more difficult.

In addition to these tests in service, each lot of powder, the lots varying from 25,000 to 100,000 pounds, depending upon the caliber, is kept under observation and continuous test at ordnance establishments. The results of these tests are plotted graphically on a record card in such a way that any dangerous tendency in the stability life is made plainly evident by a downward tendency of the corresponding curve.

Stability life of smokeless powder.—The service smokeless powders, with the exception of a few lots injured by being kept too long in the dry houses, have been found to have a very satisfactory length of stability life. There are a number of lots now in service manufactured in 1900 and apparently in good condition. Powder manufactured since 1908 is expected to have even a considerably longer stability life, due to the introduction of a stabilizer not previously used. On account of its great age and possible tendency to spontaneous combustion it was found advisable to withdraw from service all cannon powder of nitroglycerin composition, all such having been manufactured prior to 1900, at which time the composition was changed to nitrocellulose.

Improvements in smokeless powder.—The department has continued throughout the year investigations and tests with a view to improving the quality and ballistic uniformity of smokeless powder for cannon. The tests with a view to increasing the ballistic uniformity by running the powder through the blending tower several times, referred to in my last annual report, have indicated that the improvement in blending thus secured would probably be fully offset by the bad effect of the increased time of exposure to varying weather conditions. It has been determined that the moisture absorbed in the grains or condensed on the surface during several hours' exposure to a saturated atmosphere will cause a material drop in muzzle velocity. Tests made to determine the probable amount of moisture absorbed or condensed on the surface of powder during the time ordinarily occupied in blending the powder at fortifications have indicated that, if the blending is done on a dry day, there is little moisture taken up. Other tests have indicated that little moisture is taken up by powder stored in containers that are not air-tight. This is probably due to the fact that the air changes slowly within the containers and moisture is consequently very slowly introduced. As the results obtained were somewhat inconsistent these tests are being repeated.

Manufacture of smokeless powder.—Due to a provision in the act making appropriations for fortifications and other works of defense, approved February 13, 1913, requiring, in effect, that the Army

Powder Factory shall be operated at not less than one-half its capacity, the department will manufacture during the next year all the smokeless powder for which funds were provided at the last session of Congress, except a very small quantity of revolver powder and blank-ammunition powder, of a character which the department is unable to produce. This provision of law, unless repealed, will result in private manufacturers receiving no orders and thus giving up the making of powder for this department. This will throw the department upon its own resources in maintaining the standard and in improving the quality, except for such assistance as may be obtained from the Navy. This condition is believed to be an undesirable one, since it largely removes the stimulus of competition, and loses to the department the great advantages that have heretofore come through the work of the extensive laboratories and large force of skilled experts in the employ of the powder manufacturing companies. It appears significant in this connection that the government monopoly in the manufacture of powder has recently been abolished in France as the result of disastrous experience. It is thought that the wisest policy is for Congress to fix what it considers a reasonable price for powder to be furnished by contractors and with that restriction to authorize the department to give them a fair share of the work of manufacture.

High-explosive plant.—There has been installed at the Picatinny Arsenal and put into operation during the past year a plant for the manufacture of the high explosives needed by the department. It has been thus far chiefly engaged in the manufacture of the material used as a bursting charge for armor-piercing projectiles. The product has been satisfactory and the cost materially below that paid contractors. The capacity of the plant is sufficient to meet the expected needs of the department for this material and to some extent for other explosives.

Nitric-acid plant.—There has been procured during the past year for installation at the Picatinny Arsenal the equipment for the production of the nitric acid used in the manufacture of the pyrocellulose constituting the principal ingredient of smokeless powder. By means undoubtedly of this plant a reduction has been secured in the price of nitric acid, with a corresponding reduction in the cost of smokeless powder. Due to the low bids received since the procurement of this equipment, the manufacture of nitric acid has not been undertaken, but this can be done at any time that it may appear advantageous.

AMMUNITION FOR CANNON.

Projectiles.—The work of preparing all projectiles in service for the long-pointed caps to be added as soon as the emplacement hoists shall have been modified to accommodate them, has progressed satisfactorily and is now nearly completed. These caps will, by lessening the air resistance, materially increase the extreme range and the armor penetration of projectiles. A satisfactory type of cap, which can be manufactured at a reasonable expense, has been developed and tested, and its manufacture in quantity is now being undertaken.

High-explosive shrapnel.—The department has not yet been completely successful in developing the 3-inch high-explosive shrapnel referred to in my last annual report. Small sample lots have proved entirely satisfactory, but trouble has been encountered with the ballistic samples representing the first lot manufactured in quantity. An investigation is now in progress which it is hoped will determine the cause of recent difficulty and will justify again pushing the work of manufacture. The 10,000 3-inch high-explosive shrapnel purchased about one year ago from abroad have been issued to the service, and steps are being taken toward the procurement of 10,000 additional ones, pending the overcoming of the difficulties that have been encountered in their manufacture in this country.

Shrapnel cases from bar stock.—Additional machinery is being installed at the Frankford Arsenal for the manufacture of shrapnel cases of 3-inch, 4.7-inch, and 6-inch calibers from bar stock, experience with that previously installed having shown that cases of excellent quality can be so manufactured at much less than the current market prices. The inauguration of this work at the Frankford Arsenal and the adoption of similar methods by some of the contractors have already resulted in a notable decrease in the price quoted for such material.

Distance wadding.—During the past year an improvement has been made in the character of the distance wadding or material used to fill the space not fully occupied by the powder charge in fixed ammunition. Due to the possibility of the presence of objectionable foreign substances, or of the development of acetic acid, the use of excelsior has been abandoned and a cylinder of stiff cardboard cut to an appropriate length substituted therefor. The end of the cylinder nearest the smokeless powder is closed by a cardboard disk fastened thereto. The cylinder and disk are dipped in hot paraffin to make them moisture proof.

Hermetically sealing powder charges in fixed ammunition.—It having developed that the joint between the projectile and cartridge case in fixed ammunition was not always moisture proof, a metal diaphragm is now soldered into the case over the powder charge prior to inserting the projectile. This device keeps the powder charge sealed during the time when the ammunition is carried in limbers or caissons, as well as when stored in leaky boxes.

Projectile plant.—There has been installed at the Watertown Arsenal during the past year, and recently put into operation, a plant for the manufacture of armor-piercing and deck-piercing projectiles for seacoast guns and mortars. The results obtained in the firing tests thus far made with projectiles manufactured therein are very promising, the indications being that the department will be able to produce projectiles of excellent quality at a considerably less cost than it has been paying private contractors. It is hoped that improvement in the general quality of projectiles will result from the investigations which the department will be able to make in connection with this work.

Cartridge storage cases.—Important improvements have been made during the past year in the cylindrical metal containers or cartridge storage cases used to hold and protect from moisture the thousands of rounds of smokeless powder in storage at fortifications. It having been found difficult to maintain in an air-tight condition the former type, in which the cover was held in position by a strip of metal soldered in place, an improved rubber gasket type has been adopted in which the cover is secured by a bar engaging under lugs on the case. The handles will in future be omitted from storage cases, they having been found to cause the development of leaks during the rolling of the cases from place to place.

In order to insure the early detection and correction of leaks developed during transportation, testing sets have been manufactured and issued to each of the coast defenses for use in testing each case in a powder shipment immediately upon its receipt at the fortification. These precautions are expected to result in more uniform ballistics and in a longer stability life for the powder.

AUTOMATIC MACHINE RIFLES.

The automatic machine rifle, caliber .30, model of 1909, has now been in the hands of troops approximately a year and a half. The field use of the automatic rifle developed the fact that the endurance of the extractor and firing pin as originally made was not satisfactory. As a result of exhaustive trials and tests, probably the most severe that any type of automatic machine gun has ever been subjected to, a new model of extractor has been adopted. This new extractor, as well as a different steel and heat treatment for the firing pin and a slight change in the timing of the action, were used on 100 of these rifles, altered and issued to the service. During extensive firings of these rifles at the Armory no jams and hardly any breakages occurred, although the firings were most severe and thorough.

A board has been convened at the Springfield Armory for a competitive test of new automatic rifles. This board will also consider the type of mount best suited to the needs of the service.

MOUNTAIN ARTILLERY.

One battery of new 3-inch mountain howitzer matériel, referred to in my last annual report as undergoing test, will be issued in the near future to the Fourth Field Artillery for a service test before undertaking manufacture in quantity.

All of the 2.95-inch mountain guns have been provided with panoramic sights and range quadrants which will permit the use of the same system of fire as that of the field batteries and will increase to a great extent the efficiency of this matériel pending the manufacture of the modern 3-inch mountain howitzer batteries.

PACK OUTFITS.

For 2.95-inch Vickers-Maxim mountain-gun matériel.—As a result of the 1,000-mile march of the battalion of Field Artillery in the summer of 1912, the Field Artillery Board made definite recommendations for the equipment of the mountain artillery. The necessary parts to complete the equipment of one regiment in accordance with the recommendations of the Field Artillery Board have been completed, and the full equipment is under test by the Fourth Field Artillery.

Spare parts for pack outfits covering contemplated issues during six months' service in the field are being manufactured as a war reserve. These parts, when completed, will form part of the ordnance depots attached to each division.

For fire-control equipment of mountain batteries.—The pack equipment for fire-control matériel for mountain batteries has been manufactured for one regiment and is being tested in connection with the full regimental equipment referred to above.

FIELD-GUN MATÉRIEL.

The conversion of the 3.2-inch gun batteries to 3-inch of modern design continues at the rate permitted by appropriations.

Orders have been placed for the manufacture of a pilot 3-inch carriage of a new design. This new type carriage conforms to the latest developments in field matériel in permitting higher elevations and greater traverse on the carriage without moving the trail.

Two batteries of 4.7-inch gun matériel have been issued to the service.

Tests of a Deport field gun and carriage, purchased under an allotment by the Board of Ordnance and Fortification, have been made during the past year.

Designs are in progress, and manufacture will shortly be undertaken, of a new limber and caisson for 3-inch batteries, the caisson chest of which will open to the front.

HOWITZER MATÉRIEL.

The test of the 3.8-inch howitzer carriage referred to in my previous report has been completed and the manufacture of carriages in quantity has been undertaken. Two batteries of the 6-inch howitzer matériel, and two of the 4.7-inch howitzer matériel, have been issued to the service. A new type of 4.7-inch howitzer carriage has been tested, and manufacture of additional batteries of this matériel will be continued as fast as funds will permit. New designs of limbers and caissons for the 3.8-inch and 4.7-inch howitzer batteries have been completed and tested. These vehicles are arranged so that the caisson chests open to the front, instead of the rear as previously.

SUPPLY OF MOBILE ARTILLERY.

As stated in my last annual report, the supply of this class of equipment is less satisfactory than that of any other furnished by the Ordnance Department, except the ammunition for field artillery. The appropriations for the last two years for this purpose have been somewhat larger than for several years prior to that time, but it is hoped that still larger annual appropriations may be made, as even the present rate is not such as to provide a sufficient amount within a reasonable time.

COAST ARTILLERY PRACTICE.

Behavior of matériel.—Reports received during the year show continued improvement in the results of Coast Artillery target practice and, except for the accident at Fort Moultrie referred to elsewhere, satisfactory behavior of the ordnance matériel used in that work. With a view to reducing the expense for targets, thus making additional funds available for the procurement of ammunition, no more of the large-size targets, 30 feet by 60 feet, are to be manufactured for issue. It is now proposed to return to the exclusive use of the small-sized pyramidal target.

Broad-banded projectiles.—The records of this office indicate that practically all the former narrow-banded cast-iron projectiles in service have been expended, so that in future only the broad-banded type will be used. Due to improvements in design and manufacture, whereby greater uniformity of weight and finish have been secured, these projectiles are expected to result in greater uniformity of ranging.

FIELD-ARTILLERY PRACTICE.

Behavior of matériel.—Target-practice reports submitted during the year indicate that the field artillery guns, carriages, and ammunition are giving general satisfaction in service. The records of this office indicate that all the old 3-inch shrapnel in service manufactured prior to 1907 will be expended during the current year's target practice, thus leaving on hand only shrapnel of the better type and later manufacture. The same condition prevails concerning the old type of ammunition formerly in the hands of the 2.95-inch mountain batteries.

School of fire.—The increase of $20,000 in the appropriation carried by the fortifications act approved June 6, 1912, has permitted an increase in the allowance of 3-inch ammunition issued for expenditure at the School of Fire for Field Artillery. The total allowance of 3,000 rounds available for expenditure at that place was sufficient to give only approximately 60 rounds for each of the officers under instruction at the school. This amount is evidently inadequate, and recommendation has been submitted for an increase in the estimates by $10,000. This would be sufficient to provide approximately 40 additional rounds per officer for the usual number of students annually at the school.

Fuze setters.—A new type of hand fuze setter has been perfected during the year and is now being manufactured in quantity for issue to the service. It is an improvement over the former type in giving greater power and greater accuracy in the results.

New-type mobile artillery targets.—There have recently been adopted, and are under manufacture, new types of mobile artillery targets as a result of experiments at the School of Fire for Field Artillery. These targets include sleds, frames, and other parts necessary for simulating movements of infantry, cavalry, and field artillery. By means of such targets it is expected to greatly increase the interest and value of the annual target-practice work.

ARMY POWDER FACTORY.

The Army powder factory is located at the Picatinny Arsenal, which is also the principal depot of the department for the storage and issue of powder, ammunition, and high explosives.

Approximately 415,000 pounds of cannon powder and 133,000 pounds of caliber .30 and other small-grained powders were manufactured during the year. The factory cost of the cannon powder has been reduced during the year from a little less than 36 cents per pound to a little less than 35 cents per pound.

A total of approximately 1,950,000 pounds of cannon powder and 235,000 pounds of caliber .30 powder have been manufactured since the factory was put into operation in the month of June, 1908. The factory cost of this powder has been approximately $935,000, which includes fire losses. If this powder had been procured by contract at prevailing prices, it would have cost about $1,375,000. The saving has therefore been approximately $440,000.

The capacity of the powder factory is now approximately 9,000 pounds per day of 24 hours, for approximately 300 days per year, thus allowing time for repairs, holidays, etc. The equipment is being procured for reworking any very old powders that may show signs of serious deterioration. They can thus be remade into new powder of excellent quality at approximately one-half the cost of entirely new powder.

The work of installing a high-explosive plant is in progress and will be completed during the current year. The work of manufacture referred to elsewhere is now being carried on in an experimental plant of temporary construction.

FIRE-CONTROL INSTRUMENTS FOR FIELD ARTILLERY.

Tests of self-contained, short-base range finders and new observation and battery commander's telescopes are now in progress at the School of Fire for Field Artillery.

MATÉRIEL FOR MILITIA ARMORIES.

Dummy 15-pounder guns and carriages, 12-inch mortars and carriages, and 10-inch guns on disappearing carriages have been issued to a number of the militia armories for instruction purposes.

SEACOAST CARRIAGES.

The issue of 14-inch guns on disappearing carriages and 12-inch mortars and carriages to the insular possessions has been continued since my last report. The manufacture of a 16-inch disappearing carriage is in progress.

FORTIFICATION OF THE ISTHMIAN CANAL.

The issues of 14-inch guns on disappearing carriages, 12-inch mortars and carriages of the latest type, and 6-inch guns on disappearing carriages will begin shortly for the coast defenses of the Panama Canal. It is expected that a large part of the equipment will be installed in the near future.

10-INCH EMERY DISAPPEARING CARRIAGE.

The status of the work on this carriage is the same as when my last annual report was submitted.

MAINTENANCE OF THE ARMAMENT OF FORTIFICATIONS.

This work has proceeded satisfactorily during the year, and service mortars, guns, and carriages have been maintained in a good state of efficiency.

IMPROVEMENTS IN INSTALLED SEACOAST GUNS AND CARRIAGES.

The modification of seacoast matériel of the older designs is very desirable, since by the expenditure of a small percentage of their cost the carriages can be made almost equal in efficiency to the latest models. The benefit that would accrue is very large compared with the cost. Those carriages which have to date been modified are giving excellent service. Complete designs are on hand for matériel which can not now be modified on account of lack of funds. As these carriages can be used in their present condition, the necessity for their modification is not as urgent as the need for increasing the reserve of Field Artillery matériel. The estimates for the alteration of seacoast armament have therefore been reduced to a minimum, while the estimates for Field Artillery have been increased. Sufficient funds have been available during the past year for the modification of forty 15-pounder balanced-pillar carriages to provide them with new telescopic sights and improved elevating and traversing mechanisms. The modification of the remainder of these carriages will be continued as funds permit. The modernizing of all 10-inch disappearing carriages, model of 1894, has been completed.

MISCELLANEOUS.

A general technical library for the use of officers and employees is being installed at each of the principal manufacturing arsenals of the department, supplemented in each case by a special library of works bearing directly upon that part of the output peculiar to the establishment concerned.

A history of each arsenal from the date of its establishment has been prepared and is on file in the office of the Chief of Ordnance.

The regulations for the administration of the civil service in the Ordnance Department, United States Army at large, have been revised and printed.

INSPECTOR OF ORDNANCE, RICHMOND, VA.

The duties of inspector of ordnance at Richmond, Va., and also at the Washington Steel & Ordnance Co., Giesboro Manor, D. C., were performed by Capt. L. B. Moody, in addition to his duties in the office of the Chief of Ordnance.

The principal articles under inspection at Richmond were cast-iron projectiles and common steel shell at the works of The Tredegar Co. This company, which has only recently engaged in the manufacture of steel shell and shrapnel cases for mobile artillery, has accepted large contracts for this class of material.

At the Washington Steel & Ordnance Co. steel projectiles for seacoast cannon, shrapnel cases for mobile artillery ammunition, and miscellaneous work were undertaken. The company has been given an order for complete shrapnel projectiles, the first to be made by it.

The total value of the material under contract at both places during the year was $1,435,982.95. The value of the material completed during the year was $343,293.86.

INSPECTOR OF ORDNANCE, BALTIMORE, MD.

The duties of inspector of ordnance at Baltimore, Md., were performed by Maj. L. T. Hillman, from July 1, 1912, until November 8, 1912, and by Capt. John Lund, from November 9, 1912, until June 30, 1913, in addition to their duties in the office of the Chief of Ordnance.

The work of this office consisted in the inspection of twenty-eight 4.7-inch howitzer carriages, model of 1908, contract for which was awarded to the Detrick & Harvey Machine Co. under date of November 7, 1912. Work on these carriages is progressing at a satisfactory rate.

INSPECTOR OF ORDNANCE, NEWPORT NEWS. VA.

Capt. J. B. Dillard performed the duties of inspector of ordnance at Newport News, Va. The Newport News Shipbuilding & Dry Dock Co. is building 14-inch gun turrets, model of 1909, under contract dated November 21, 1910. Progress of the work during the year has been generally satisfactory, and it is expected that final delivery will be made within the coming fiscal year. The quality of the work done by the company has been satisfactory.

BETHLEHEM STEEL CO.

The inspection work during the fiscal year has been in charge of Col. Frank Baker.

Work has been in progress on 133 different contracts and orders, which involved the following principal material: Barbette armor, castings and forgings for 14-inch turrets, castings and forgings for seacoast and mobile artillery guns and carriages, and projectiles.

The value of the material under manufacture during the year was $1,981,511.24. The value of the material completed during the year was $779,913.39. The total weight of shipments made during the year was 2,908,758 pounds.

INSPECTOR OF ORDNANCE, PITTSBURGH, PA.

The inspection work covered by this office was in charge of Maj. J. H. Rice from July 1, 1912, until December 14, 1912, and in charge of Maj. L. T. Hillman since that date, in addition to their duties in the office of the Chief of Ordnance. It has included all ordnance matériel manufactured in western Pennsylvania and Ohio.

The Titusville Forge Co., Titusville, Pa.—This company has a subcontract from the American & British Manufacturing Co., Bridgeport, Conn., for sets of forgings for 3-inch field guns, models of 1902 and 1905, which have been partially delivered at the Watervliet Arsenal; also a contract with the Watervliet Arsenal for jacket forgings for 6-inch gun, model of 1908 MII.

In addition to the above, this office has had under inspection at various places ordnance material being manufactured for other ordnance establishments and for contractors. This work included 51 different orders or contracts, manufacture under which was in progress at 18 different places.

The total value of the material under inspection by this inspector during the year was $98,238.12. The total value of material accepted and delivered during the year was $80,953.01.

INSPECTOR OF ORDNANCE, MIDVALE STEEL WORKS.

The inspection work was in charge of Col. Frank Baker, in addition to his duties as inspector at the Bethlehem Steel Co. It consisted principally of the inspection of material for guns and their carriages; steel for small arms, manufactured at the Midvale Steel Works; 12-inch mortar carriages under manufacture at the works of the Southwark Foundry & Machine Co.; and miscellaneous ordnance material under manufacture at 20 other establishments in Philadelphia and vicinity. The total number of different orders and contracts was 156.

The total value of the material under inspection was $510,980.38, of which that to the value of $402,156.68 was completed. The total quantity of material inspected and shipped was 4,842,559 pounds.

SANDY HOOK PROVING GROUND.

Sandy Hook Proving Ground was commanded from July 1, 1912, to September 20, 1912, by Col. Rogers Birnie; from September 21, 1912, to October 4, 1912, by Maj. Jay E. Hoffer; and since October 5, 1912, by Col. Edwin B. Babbitt, who is also a member of the Ordnance Board (president from October 5, 1912, to July 3, 1913), of the Board for Testing Rifled Cannon, of the board created by paragraph 27, Special Orders, No. 264, dated War Department, November 12, 1909, the Board of Engineers, and armament officer of the Sandy Hook armament district.

The ballistic tests of service and experimental artillery matériel included, as usual, ammunition, armor plates, and guns. The principal new or experimental matériel under test included 6-inch disappearang carriage, model of 1905 MII; 14-inch disappearing carriage, model of 1907; recoil and counter-recoil system of 14-inch turret mount; 12-inch mortar carriages, models of 1896 MIII and 1908; 12-inch mortars, models of 1908 and 1912; 14-inch guns, models of 1907, 1907 MI, and 1909; 6-pounder balloon gun, carriage, and sight; 3-inch and 3.8-inch howitzers and carriages; 2.95-inch Deport field gun; 2.56-inch and 2.95-inch Deport mountain guns; and 1-pounder subcaliber tubes for 3-inch field gun and 4.7-inch howitzer.

The number of rounds fired from guns of various calibers during the year was 3,487. Twenty-two fragmentation tests of projectiles were made. These firings necessitated the preparation of 398 reports and firing records, and the plotting of 14 targets and of a large number of charge-velocity and charge-pressure curves for powder records.

U. S. S. "Ordnance."—The U. S. S. Ordnance has performed the usual service between Pier 12, East River, New York City, and

Sandy Hook, N. J., throughout the year. During the year the boat carried 52,647 passengers and 3,219,455 pounds of freight. The distance traveled was 14,955 nautical miles, and the coal consumption was 1,253 long tons.

Buildings.—A refrigerating and powder-heating plant was built under an appropriation of $6,000 carried in the sundry civil act approved August 24, 1912, on the site of that destroyed by fire on the night of February 11, 1912.

Wharf.—Portions of the wharf have been thoroughly overhauled and repaired, and the remainder will be repaired under an appropriation of $8,500 carried in the sundry civil act approved June 23, 1913. A contract has been entered into for removing about 24,000 cubic yards of silt and sand from the vicinity of the wharf. This will give a depth of 15 feet of water at low tide and render the dock and approach thereto safe in all weather.

Ordnance School of Application.—The student class has comprised nine officers. Maj. Jay E. Hoffer, in charge of the school, had for his assistants Capt. H. K. Rutherford and Lieut. J. J. Thomas, who very capably performed their duties.

In addition to the lectures given by the instructor in the different courses, the class has had the benefit of interesting lectures from outside the school by Lieut. Col. Odus C. Horney, Ordnance Department; Dr. M. W. Franklin and Messrs. H. M. Hobart, J. A. Haraden, M. O. Troy, W. P. White, and G. H. Stickney, representing the General Electric Co.; Messrs. William C. Ward, H. P. Fisher, A. E. Allen, and D. A. Bowen, representing the Westinghouse Electric & Manufacturing Co.; and Mr. T. F. Brown, in charge of the manufacture and treatment of steel at the Watertown Arsenal. These gentlemen are technical men of high standing in their own professions, and their courtesy in giving these instructive lectures is highly appreciated.

During the year the members of the student class visited the following establishments: Picatinny Arsenal, Dover, N. J.; Goldschmidt Thermit Co., Jersey City, N. J.; Otto Gas Engine Co.'s installation at Charles Mundt & Son, New York City; Frankford Arsenal, and the Midvale Steel Co., at Philadelphia, Pa. These visits to establishments at which are manufactured ordnance material and commercial material used in the work of the Ordnance Department are considered of great value to young officers in giving them detailed information concerning the work of the various plants visited.

Another year's experience with the student class divided into officers performing proof work and officers taking the student course of studies has further demonstrated the wisdom of this policy, as a greater quantity, and a better quality of proof work for a given number of officers has been secured by this arrangement. It is to be regretted that more time of experienced officers of the department can not be given to the school.

ROCK ISLAND ARSENAL.

This arsenal was commanded during the year by Lieut. Col. George W. Burr, who is also ordnance officer of the Central Department.

The number of receipts and issues of ordnance stores is not materially different from last year, but the number of shipments is somewhat less, due in part to the absence of so many troops from the Central Department and in part to the operation of General Order No. 25, War Department, 1912, which requires issues of personal and horse equipments and cleaning and repairing materials to post ordnance officers, instead of organization commanders. The absence of troops from the Central Department has resulted in larger issues to other arsenals for reissue. This branch of the arsenal's business therefore remains essentially the same.

Additional storage space.—The increasing use for shop purposes of the buildings formerly used as storehouses has emphasized the need of additional storage capacity at this arsenal. Unless emergency provision for shelter can be made, much valuable artillery matériel will have to be stored in the open. In 1900 there were available for storage purposes 1,025,384 square feet of space. Due to the occupancy for shop purposes of buildings temporarily used as storehouses, at the present time approximately only 304,568 square feet remain available. In war emergency, with shop expansion imperative, the storehouse situation at this arsenal would be almost hopeless.

Filtration plant.—The new filtration plant was completed and finally accepted January 13, 1913, since which date it has been in operation. An excellent drinking water is being obtained, and, as the water mains gradually become cleaned, water from the mains is being used in all departments of the arsenal.

Scientific management.—The work of installing the systemization and standardization features of the Watertown Arsenal system or shop and storehouse management, begun at this arsenal in September, 1911, has made gratifying progress during the year. The responsible employees are gradually becoming familiar with the new methods and are appreciating their advantages. The engineering division is completely organized and is handling all expenditure of operation orders—a task of magnitude, as 679 expenditure orders were issued during the year. The planning room has completed route sheets and assembling charts for many of the arsenal's most important manufactures. It has materially increased the output and decreased the cost by improved methods. The suggestion by the planning room of improved methods of doing work has made the foremen more alert, and more suggestions than formerly for increasing production are received from them. The following are a few of the many cases of reduction of cost of work as a result of the new system:

Name of article (parts of 3-inch field gun carriage).	Former price.	Present price.
Cylinder head	$4.25	$2.41
Cylinder end	2.08	.87
Cylinder-end stud	3.25	1.35
Elevating bevel gear	4.00	1.81
Piston	2.25	1.04
Hub cap	.35	.14
Tie-rod clamps	.25	.16
Sight-bracket support, rear	2.00	1.55
Sight-bracket support, front	1.75	.95
Axle bearing	10.25	8.50
Pintle	25.00	15.00

All of the raw material which was stored in the attics and storerooms of the different departments has been brought together in the material storehouse and entered on balance of stores records. As a result large quantities of material which had been considered obsolete by one department have been, and are being, used in other departments. Similarly, all steel and brass formerly variously stored have been collected in the steel storeroom, from which issues are made as required. The new storehouse methods developed that large quantities of steel and other materials were on hand which will now be utilized, where suitable, before further purchases are made. The saving to the Government from bringing to attention and using these forgotten or supposedly obsolete materials is difficult to estimate, but, unquestionably, is very large. Nearly all requisitions for material are now furnished by the Balance of Stores Division, greatly reducing the number of requisitions, and resulting in the purchase of material in larger quantities at correspondingly lower prices. This concentration of responsibility for the maintenance of stock also more certainly insures raw material being on hand when required for manufacturing purposes. The Cost and Time Division is well organized and making commendable progress in securing accurate costs of all articles fabricated. While much remains to be done before the system can be regarded as fully installed, the progress made, and the economical results obtained, in the 21 months since it was started can not but be regarded as most satisfactory.

Safety devices.—Continued attention has been paid to the reduction of the number of preventable accidents to employees by the provision of adequate safety devices. Open belts and exposed countershafts have been boxed, exposed gears covered with metal guards, band saws protected by wire guards, emery wheels shielded and frequently inspected, punch presses fitted with safeguards and with knockouts for removing the work without hazarding the operator, strawboard disks placed in the pulleys of belt polishing machines to protect the workmen's fingers, and improved safety arrangements provided for the acid baths in the plating room. First aid is given all injured employees, however slight the injury, and record made of the case. Inquiry is then made to determine whether repetition of the accident can be prevented by mechanical device, and if so the safety device is provided.

Laboratories.—Both the chemical and physical laboratories have continued to be of great value to all departments of the arsenal. Numerous samples of steel, coal, oils, and miscellaneous materials purchased and of water from the filtration plant have been tested. The total number of tests during the year was 3,329.

Armory shops.—The armory shops have been operated during the year with a gradually decreasing output, and with the purpose of completing the orders in hand and entirely discontinuing the manufacture of small arms at this arsenal some time this fall. Nineteen thousand three hundred and sixty-four United States rifles, caliber .30, model of 1903, and 19,115 bayonets, model of 1905, have been manufactured. In addition many spare parts have been fabricated and a large amount of repairs completed. The cost of the rifle under the last order, completed April 15, 1913, was $13.96.

Arsenal shops.—The shops include the mobile artillery vehicle shops; harness shop, with leather and cloth departments; blacksmith shop;

foundry; equipment shop; tin shop; polishing and plating shop; and the woodworking and painting shops. The output of these shops for the year has embraced a great variety of articles, including the manufacture and alteration of carriages, limbers, caissons, battery wagons, store wagons, and reels and carts for mobile artillery, the manufacture of Artillery harness, pack outfits for mountain artillery and machine guns, horse equipments for Cavalry, personal and mess equipments for all arms of the service, targets and target-practice supplies, marksmen's insignia, cartridge storage cases, and other material for Coast Artillery, in addition to the repair for reissue of unserviceable but repairable material of these different kinds turned in by the service for that purpose. Much experimental work of all kinds has been done. All of these departments have been very busy during the year. The shop equipment has been kept in good condition and up to date.

Aside from the quantity and variety of work continuously in progress in these shops during the year, a prominent feature of their operation has been the continued effort for improved methods and designs and proper economies. A few instances are here given: The substitution for manufacturing purposes of commercial gas, purchased locally, for gas made from gasoline, has resulted in a saving of $311 per month; the design of an improved currycomb without leather back, lighter and much more compact than the present model, which can be fabricated for about 15 cents, as compared with a manufacturing cost of 59 cents for the present model; the development of a machine method of dubbing leather, replacing the old hand method, which greatly reduces the cost of this operation; the use of cuttings from occasional spoiled impressions of the printing machine, in place of new paper, for wrapping targets, has resulted in a saving of 30 cents per 1,000 targets; a wooden fencing sword has been designed, following the lines of the new Cavalry sword and of a design permitting the use of machine finishing at a cost of $0.068 each. compared with $0.1736 for the old model.

The following tabulation shows the reduction in cost of manufacture of a number of representative articles with the cost for the preceding year or with that under the last order fabricated:

Article.	Former price.	Present price.
Miniature targets for Hollifield rifle-rod outfits....per M..	$1.00	$0.23
Artificer's chests, model of 1910....each..	31.15	21.22
Target pasters....per million..	20.42	10.12
Limber-pole bodies, without ferrules....each..	25.51	24.96
Paper targets, 6 by 6 feet....per M..	40.49	39.74
Protecting stick for pack outfits....per C..	54.45	47.80
Intrenching shovels....do....	51.65	49.95
Forge and bellows....do....	1,793.00	1,370.00
Wire traces for Artillery harness....do....	510.31	500.59
Lead-rein rollers....do....	9.61	5.61
Trace chains....do....	55.35	49.55
Cavalry canteen snaps....do....	4.94	4.41
Spur buckles, model of 1911....do....	10.00	8.35
Covert snaps for halter tie ropes, bronze plated....do....	15.00	6.90
4.7-inch gun carriage, model of 1906....each..	4,925.25	4,361.18
4.7-inch gun battery wagon, 4.7-inch gun and 6-inch howitzer forge limbers, model of 1908....each..	4,606.08	3,663.59
4.7-inch gun store wagon and 4.7-inch howitzer store limber, model of 1908....do....	4,417.80	3,580.21
Feed bags, model of 1912....do....	1.16	.98
Cleaning leather, backs....per C..	2.48	.29

Field Artillery plant.—The sundry civil act approved June 23, 1913, carries an appropriation of $250,000 for increasing the capacity of the Field Artillery plant at this arsenal. It is intended to extend the mobile artillery plant to include all of Shop I building, transferring the harness shop from Shop I to Shop K, which latter has heretofore been used as a storehouse. Plans for heating and lighting and for office, sanitary, and other facilities required to fit Shop K for its new use have been prepared, and the work is being prosecuted.

Proving ground and drafting room.—The work in the drafting room has been of the usual character and has been kept up to date. Eight hundred and fifty-four rounds have been fired at the proving ground in proof and experimental work. Twelve different road tests of experimental vehicles or devices, aggregating several thousand miles, have been conducted and reported upon.

Light and power plant.—The operation of the arsenal power plant has been continuous and satisfactory throughout the year. No interruptions on account of ice or water conditions have occurred. While the power plant was up to date when installed, about 13 years ago, it is rapidly becoming obsolete. Modern installations of such plants have direct connected, instead of geared, water wheels, with a large increase of efficiency. As the wheels of the present plant will have to be replaced at a not very distant date, when such replacement shall be undertaken the improved system should be installed.

Saddlers' and Battery Mechanics' School.—Thirty-six enlisted men reported about August 1, 1912, for instruction in the training school for saddlers and 8 for instruction in the training school for battery mechanics. Of this number 29 satisfactorily completed the former course and 7 the mechanic's course. One was relieved from duty in the school on account of defective eyesight, 2 died, 4 deserted, and 1 failed to reenlist. All of the men who completed the course are qualified to properly care for and repair the equipment used in their organizations. The effect of returning such skilled men annually to their organizations should be most beneficial.

SPRINGFIELD ARMORY.

The armory was commanded up to September 1, 1912, by Col. S. E. Blunt, on which date he was retired at his own request after 40 years' service, and since that date by Lieut. Col. W. S. Peirce.

Grounds and buildings.—Automatic sprinkler systems have been installed in the two principal storehouses during the past year. Estimates for similarly equipping the other storehouses have been submitted. When this work shall have been completed, it is believed that the valuable buildings and property at this armory will have as high a degree of protection against fire as can be given by any kind of apparatus.

Manufactures.—During the year 38,070 United States rifles, caliber .30, model of 1903, were manufactured, and 3,801 cleaned and repaired. There were also manufactured 40,609 bayonets; 3,333 bolos, model of 1909; 8,335 bolos, model of 1910; 3,700 Hospital Corps knives; 8,471 Cavalry saber scabbards; a considerable number of sets of spare parts for the service rifle and the automatic machine gun, caliber .30, model of 1909, besides small quantities of various other articles. Two hundred and fifty automatic machine rifles, caliber

.30, model of 1909, the manufacture of which had been begun in the preceding year, were also completed.

The preparation of tools, fixtures, gauges, etc., for the manufacture of the automatic pistol, caliber .45, model of 1911, has been practically completed and the manufacture of 11,285 pistols begun. The plant will have a capacity of 40 pistols per day of eight hours.

The tools, fixtures, and gauges required for the manufacture of 125 of the new Cavalry swords per day have been completed. Work has been begun on an order for 20,000 of these swords, and a number sufficient to arm two troops of Cavalry has already been completed.

Cost of manufacture.—During the year several improvements in methods of manufacturing the service rifle have been introduced which effect a saving, but due to the decrease in the total amount of manufactures at this armory the shop-expense factor has been increased sufficiently to offset the savings made. The work of preparing tools, fixtures, and gauges for the automatic pistol and new Cavalry sword, as well as the experimental work in developing the alterations in the automatic machine rifle, have so occupied the attention and time of all concerned that the subject of improvements in the manufacture of the magazine rifle has not received the usual study. This work will, however, be resumed during the coming year, although it is believed that the present cost of the service rifle can not be materially decreased without affecting the quality of workmanship.

Experimental work.—During the year endurance tests of automatic machine rifles, caliber .30, model of 1909, have been made to test the action of altered parts. The following-named articles have also been tested and reports thereon rendered: Schouboe automatic pistol, Siebold armor waistcoat, Bang automatic rifle, Moore silencer, Maxim silencer for automatic machine rifle, Becker steel shield, and Steyr automatic pistol.

Inspection of outside manufactures.—During the past year the inspection of articles manufactured under contract at Worcester, Mass., Hartford and Bridgeport, Conn., and vicinity has been performed by officers from this armory. The total value of all material inspected was $1,051,468.86.

Storehouse records.—The records of the issues of rifles by number have proved so successful for reference purposes that similar records for automatic machine rifles and automatic pistols have been established. These records are in card form and will show the disposition made of every rifle and pistol manufactured by or issued from this armory.

FRANKFORD ARSENAL.

This arsenal was commanded during the year by Lieut. Col. George Montgomery.

Fiscal and property transactions.—The value of the ordnance property manufactured during the year was $1,197,536, and the value of the property remaining uncompleted at the end of the year was $2,781,867.51. The number of manufacturing orders was 1,424. The amount disbursed was $1,928,510.97, and the corresponding number of vouchers was 3,166. The amount of the purchases was $2,209,113.88, and the corresponding number of purchase orders was 4,905. The weight of property shipped during the year was 11,371,651 pounds, and the weight of that received was 30,525,347 pounds. The corresponding number of vouchers was 5,400, and the number of items of accountability on the return was 10,900.

Administrative methods.—The overhauling of materials and supplies for manufacturing operations was completed during the year, which comprised fixing the maximum and minimum limits for every item of stock and the installation of the necessary records for the operation of the system. The system by which the manufacturing operations of the arsenal are conducted, so that the prescribed quantities of materials and supplies are utilized for their intended purpose, has been quite successful, but much remains to be done toward perfecting the personnel engaged on the work. The use of the stock fund for sorting, inspecting, and repairing old materials received from the service has been remarkably successful in that it has enabled this arsenal to separate this character of work from straight manufacturing, so that economical methods can be separately introduced. The pattern system referred to in the last annual report has proved to be expeditious and economical in the furnishing of patterns for any desired object.

The purchase of coal according to the quantity of water that it may evaporate has proven to be very economical. The intelligent purchase of coal and a more efficient feed-water heater have led to a saving of nearly $1,800 during the six months of operation.

Shop management.—The average number of employees at the beginning of the year was 1,411; on December 31, 1912, 1,287; and at the end of the year the number was 1,631. Their total compensation for the year was $907,805.49.

The system of shop management introduced during the preceding year in connection with the manufacture of small-arms ammunition proved to be entirely successful. A planning room has been established to regulate the manufacture of artillery ammunition, which is a modification of that used to regulate the manufacture of small-arms ammunition. The records reaching the planning room are, however, only of the beginning and final operation on each component; but a record is moved with each component which gives the number of the various operations performed on it, which is available for the information of the foremen in handling the orders.

The Taylor system of shop management has been installed to control the manufacture of fire-control instruments, sights, etc., so that the work is now planned and controlled entirely from the planning room. The machines have not, however, been altered to give the maximum production, nor has the method of distributing the shop expenses more scientifically been established, nor has the premium system of compensation been introduced.

Manufacture of small-arms ammunition.—There were manufactured during the year 52,992,180 ball cartridges, 5,010,964 blank cartridges, 107,316 dummy cartridges, and 214,500 guard cartridges for the service rifle. There were also manufactured 6,932,380 revolver ball cartridges, caliber .38; 488,840 revolver ball cartridges, caliber .45; and 4,973,660 ball cartridges for the caliber .45 automatic pistol.

The average accuracy for all rifle ammunition manufactured during the year showed a mean radius of 4.045 inches, as compared with 4.132 inches of last year. The average total cost of the manufacture of rifle ball cartridges was $27.08 per thousand, as compared with $24.42 per thousand of last year. The increase in cost was largely due to higher costs of materials and smaller orders, there being approximately a reduction of 9,000,000 in the quantity of rifle ball ammunition manufactured during the year. The average cost of rifle ball ammunition procured from private manufacturers was $38.06 per thousand. The average cost of pistol ball ammunition was $16.28 per thousand, as compared with $15.84 per thousand for last year. This increase has been entirely due to increase in shop expenses. The average cost of pistol ammunition, caliber .45, purchased from private manufacturers, was $18.75 per thousand. Considerable embarrassment was caused during the latter part of the year by the failure on the part of a contractor to furnish cupro-nickel of the standard specifications. It is a matter of regret that satisfactory cupro-nickel can be furnished only by a limited number of concerns in this country.

Manufacture of Artillery ammunition.—The principal output of Artillery ammunition was 12,588 fixed common shrapnel; 9,709 fixed high-explosive shrapnel, Ehrhardt design; 2,000 fixed blank saluting charges, and 15,026 cartridge cases, all for 3-inch field gun; 1,800 fixed cast-iron shell for 6-pounder gun; and 1,046 fixed common steel shell; 3,603 fixed cast-iron shot for 3-inch (15-pounder) gun target practice; 3,000 fixed common steel shell and 2,438 fixed common shrapnel for 4.7-inch gun; 6,873 21-second combination fuzes; 1,026 31-second combination fuzes; 11,364 base detonating fuzes, medium caliber; and 4,094 base detonating fuzes, major caliber.

The accuracy of the 21-second combination fuze has shown its superiority over the only one manufactured by an outside concern with which it entered into competition.

The costs of Artillery ammunition show generally a slight reduction over the costs of the preceding year, although the department engaged in this work had the disadvantage that it was not working at its capacity during the early part of the year and had to contend with considerable reorganization due to transfer of machinery. The costs of Artillery ammunition compare most favorably with prices paid private manufacturers for corresponding material. 21-second and 31-second combination fuzes are manufactured for $2.05 and $3.15 each, respectively; the last quotations received from private manufacturers were $4.30 and $7 each, respectively, but no orders were placed. Fixed high-explosive shrapnel for 3-inch field gun can be manufactured at a total cost of $10.15 each; shrapnel procured abroad and assembled here cost $13.42 each. The 3-inch common shrapnel, without fuze, is manufactured at a cost of $4.62 each; under the last contract this cost was $5.79 each. Common shrapnel, without fuze, for 3.8-inch, 4.7-inch, and 6-inch guns and howitzers can be manufactured at a cost of $14.15, $21.70, and $33.93 each, respectively; the corresponding contract prices are $17.50, $25, and $37 each, respectively. The manufacture of shrapnel from bar steel is no longer experimental, and the necessary machinery to largely increase production by this method has been ordered. The following reductions in costs are anticipated as a result of employing this method of manufacture: 3-inch shrapnel, $1.50 each; 3.8-inch, $5 each; 4.7-inch, $4.50 each; and 6-inch, $3 each. When the arsenal is working at its full capacity a reduction in cost of at least $200,000 would be effected in the manufacture of shrapnel. This method of manufacture was advanced and made successful by Maj. W. J. Hawkins, Ordnance Department. Considerable automatic machinery has been ordered for the manufacture of shrapnel and fuzes, which will increase the capacity of the plant for these articles from 25 to 40 per cent.

The quantity of explosive for small-caliber shell has been reduced so that in case of a premature explosion the gun will not be ruptured. All mobile artillery shell are now tested hydraulically for the purpose of rejecting those that are porous. Mobile artillery shell are now manufactured, in limited quantities, with base plugs, which has the advantage of permitting the use of shell fillers in cartons. Cardboard distance wadding for propelling charges has been adopted, replacing excelsior, which is objectionable for many reasons. The loose igniter has been omitted in the case of the smaller calibers. A night tracer of the delay-pellet direct-ignition type has been developed, and tests have shown it to be satisfactory. A smoke-bomb apparatus for Field Artillery has been developed to a successful conclusion. An illuminating grenade, to be fired from the caliber .30 rifle, has given satisfactory results. Electric primers for Seacoast Artillery, of single-wire and two-wire combination, have been successfully developed.

Manufacture of instruments.—The principal manufactures of instruments consisted of, among other articles, 108 range quadrants, 25 elevation quadrants, 24 Warner and Swasey azimuth instruments, 115 sextant telemeters, and 26 panoramic sights. All instruments are now made dust and moisture proof, which has increased their cost, but should also materially decrease the charges for their maintenance.

Manufacture of miscellaneous articles.—The principal miscellaneous manufactures have been pressure-gauge outfits, specimen boards, and paints.

Buildings and grounds.—An artillery primer-loading shop was constructed, at a cost of $3,722.26, wherein all dangerous work involved in the manufacture of primers will be performed. An additional black-powder magazine was constructed, and lightning protection for the magazines provided, at a cost of $589.83. The artillery primer dry house, destroyed by explosion, was reconstructed, at a cost of $545.57. Three toilets and wash rooms for employees were installed, at a cost of $1,746.45. Two tunnels and ducts for the transmission of heat, power, and light were constructed, at a cost of $3,037.41. The frame building formerly utilized as a primer shop was relocated and is now utilized as a planning room for the manufacture of artillery ammunition; the cost of this alteration was $506.73.

WATERVLIET ARSENAL.

This arsenal was commanded during the year by Lt. Col. W. W. Gibson, who is also a member of the Board for Testing Rifled Cannon.

Manufactures.—Extra shifts have been employed in the shops for work on 12-inch mortars, model of 1912; 14-inch Navy guns; and modifications of Army 14-inch guns, model of 1907 MI, and 12-inch mortars, model of 1908. The final eight of an order of sixteen 6-inch Navy guns to be relined have been completed. Five 14-inch

Navy guns, out of an order of 6, have been completed and shipped; the sixth gun will be completed in a few months. Four 12-inch Navy guns have been lined and shipped. Four more of these guns are under repair in the shops. One 12-inch gun, model of 1895, has been lined and shipped, and two more are under way and will be completed in the near future. Work on the 14-inch guns, model of 1910, 12-inch mortars, model of 1912, and 6-inch guns, model of 1908, is well under way. Three of the mortars have been completed and shipped. Six 15-pounder guns, model of 1903; eleven 6-inch howitzers, model of 1908; and nineteen 3-inch field guns, model of 1905, have been completed and shipped. Work on the remainder of the 3-inch field guns, models of 1902 and 1905, has been delayed, due to delay in deliveries of forgings. On account of the length of time required to complete large gun orders, it has not yet been possible to make any extensive study of costs under the new system. A number of smaller orders have been listed, however, which furnish some basis of comparison. These show, in general, some reduction in the total labor cost, although in many cases the increased cost of materials has been marked. It is believed that it can be stated that the cost of production, considering the increase in the cost of labor and material, is less under the present system than it would have been under the old system.

Freight.—The total tonnage received and issued was slightly greater than during the preceding year, that received being 13,806,590 pounds and that issued 2,920,854 pounds.

Shop management.—The installation of many of those features of the Taylor system of shop management successfully tried out at the Watertown Arsenal has continued during the year.

Engineering division.—The engineering division and the property division have been consolidated. This change has been found very advantageous, since a large number of the papers handled in either one of these divisions must be handled in the other. The work of the engineering division is becoming more efficient as the personnel becomes trained and as former cost records accumulate. The discrepancies between the estimated and actual costs are becoming smaller and fewer in number. The work of this division shows a marked advance in efficiency during the year.

Operating department.—The shops have been operated during the year at a greater capacity than during the preceding year. The number of employees has been increased from 270, in July, 1912, to 314, on June 30, 1913. As regards the new system of shop management, certain difficulties are arising in the shops after the work has been put into the hands of the foremen. These difficulties have been complained of, and as a result a careful investigation has been made, with a view to obtaining the evidence of the foremen and others concerned in the actual work independently of the planning room. A study will be made of this evidence with a view to determining what remedies can be applied to correct the unfavorable conditions. These difficulties appear to have arisen from the fact that the trained officers in charge of introducing the system have not remained at this arsenal long enough to secure the results anticipated. Many minor changes and improvements have been made from time to time to increase the accuracy of the work, which is in a measure attested by the steady decrease in the cost of replacements. For the last seven months of the fiscal year ended June 30, 1912, the average monthly cost of replacements for the machine shop was $92.96. For the first 10 months of the present fiscal year this average monthly cost of replacements was only $38.21, although the volume of work was larger. The needs of this arsenal as to new machine tools have been fully stated in the estimates submitted.

Power plant.—The power plant has operated during the past year under continued overload conditions, and an increase in the capacity of the plant will be necessary in the near future. The boilers which supply the steam turbines are in bad condition, and a new battery of boilers will have to be installed within a few years. For ordinary heating purposes these boilers are found to be still serviceable, but not for use in connection with the steam turbines. A marked saving has been made in the amount of coal used for heating purposes during the year by more careful attention to boiler-room methods and to shop conditions in order to avoid waste of heat. This saving amounted to 568½ gross tons of coal during the year, or about $2,400. The power plant should be increased by the addition of a third motor generator set, and the switchboard should be replaced by a larger modern board. An estimate for this has been submitted. A new air compressor is also needed. The New York State Legislature has provided for the continuance of the canal passing through the arsenal grounds, which insures the continuance of the water-power license granted to the arsenal by the State of New York many years ago, in compensation for the maintenance of the stone walls along the canal banks. Steps are being taken to prepare plans for the further development of this water power, within the limits of the grant, so that the maximum amount of power may be obtained. The work contemplated will include the enlargement of the penstock and tailrace and the installation of a modern water turbine and a direct-current generator. It is estimated that at least 200 kilowatt-hours capacity may be obtained from this source, or four times the present amount. If this additional power from the canal can be provided for, it will materially reduce the large overhead charges for power now paid the Adirondack Power Co.

Buildings and grounds.—The grounds have been kept in good condition by the enlisted detachment, and considerable filling and draining have been done. During the latter part of March, 1913, the Hudson River rose and flooded all the lower arsenal. This necessitated the removal of the stores from the quartermaster and commissary storehouses to the upper arsenal, where they are now being housed in a building which has been suitably altered for the purpose. While the flood, which was the worst on record, reached the first floors of all the buildings east of the canal, the total amount of damage was only a few hundred dollars. No property was lost, the loss being simply that due to the repairs needed in cleaning the buildings and stores.

The alteration of the lumber store shed, known as "Shed L," has been completed, and the carpenter shop has been removed from the lower arsenal and installed therein. This reduces the cost of operation of the arsenal as a whole, and in addition greatly reduces the fire risk in the large storehouses. This building is also arranged at one end for the concentration of most of the manufactured stock of the arsenal.

The work of altering the small-gun shop and rearranging the field and siege gun departments is progressing. Under the plans proposed, the work on the small parts will be concentrated in one shop, where similar machines can be grouped for supervision and operation. The tool room will be moved to the center of tool usage. The field and siege gun departments will then require only the work on gun bodies; hoops and jackets can be located in closer proximity to the larger machines used for such work. The duplication of similar machines in different departments will be obviated by these changes. The manufacture, grinding, repairing, and issuing of tools will be located together for better superintendence and to give room for much-needed expansion.

The issues and receipts of ordnance stores during the past year have greatly increased over those of preceding years, the issues numbering 2,247 and the receipts 453. The total weight of stores received during the year was 13,805,590 pounds; that of those shipped, 2,920,854 pounds. The disbursements during the year for material amounted to $114,924.08; for labor, to $224,215.58; or a grand total of $339,139.66.

WATERTOWN ARSENAL.

This arsenal was commanded during the year by Lieut. Col. C. B. Wheeler, who is also armament officer of the Northern Armament District and a member of the Board for Testing Rifled Cannon.

The amount of work during the year, as measured by the total expenditures, was somewhat less than that of the previous year, although the value of the material completed, $1,271,700, was greater than that of the year before. The total number of employees at the end of the year was 573.

The principal operations have comprised the manufacture of seacoast gun carriages and parts required for the alteration and repair of carriages already in service. Gun carriages of the following types were completed during the year: Mount for 14-inch gun turret, model of 1909; 14-inch disappearing carriage, model of 1907; 6-inch disappearing carriage, model of 1905 MII; 12-inch mortar carriage, model of 1908; 6-inch barbette carriage, model of 1910; 12-inch mortar carriage, model of 1896 MIII; and 5-inch mounts, mark XIII, model 2, for the Navy Department.

Safety appliances.—Safety appliances for the protection of workmen have been installed during the year, so far as available funds have permitted, and further improvements of this kind will be made during the coming year. In connection with these improvements, the installation of metal clothes lockers and more modern workbenches in the machine shop has added to the general appearance of the shop and to the comfort of the workmen, and the workbenches, by providing suitable locked drawers for the safe-keeping of tools issued to workmen, have reduced materially the number of transactions in the tool-issue department.

Power plant.—The power plant, to which reference was made in my last annual report, is, owing to very serious delays, still under construction. It is expected, however, that the new plant will be in operation by November 1. This plant is a much needed improvement. The importance of this arsenal as a manufacturing establishment has recently been increased by the installation of a plant for making armor-piercing projectiles, and also one for making gun forgings for mobile artillery. Both of these plants are expected to be in full running order before the end of the calendar year.

Testing laboratory.—The work of the testing laboratory has been almost entirely metallurgical. In former years a great deal of time was devoted to investigative tests of cements, brick, concrete, etc., in various forms. This work is now being done by another department of the Government, the laboratory at this arsenal making only such tests of materials of this character as are desired and paid for by private parties. A Charpy impact machine has been ordered for the purpose of ascertaining the behavior of steels when subjected to suddenly applied stresses, and information valuable to the department is anticipated. An investigation of the microstructure of gun forgings has been started with a view to securing information to serve as a basis for changes in specifications when required.

System of management.—The system of management at this arsenal, referred to in previous reports, has been continued in operation, with some minor extensions. The further and continued experience with the methods forming the basis of the system confirm my previously expressed opinion of its merits.

NEW YORK ARSENAL.

This arsenal was commanded during the year by Col. O. B. Mitcham, who also performs the duties of inspector of ordnance, ordnance officer of the Eastern Department, and armament officer of the Central Armament District.

The arsenal has no special facilities for manufacture or repair of ordnance matériel; its principal use is as a purchasing, receiving, and shipping depot. From its proximity to New York City its advantages as a purchasing and storage depot are manifest. As a depot for equipping troops, especially for military expeditions in time of war, its location renders it particularly valuable.

During the year 12,352 packages of stores were received, weighing 1,105,790 pounds. The number of packages issued was 14,524, weighing 1,551,177 pounds. The amount of funds disbursed during the year was $326,746.16.

AUGUSTA ARSENAL.

This arsenal was commanded during the year by Col. J. W. Bénet, who is also armament officer of the Southern Armament District.

The work of capping, grooving for base covers, and preparing for fuzes all armor-piercing and deck-piercing projectiles at the arsenal was completed during the year. All armor-piercing projectiles were rebanded with broad rotating bands and the short caps threaded for the attachment of a pointed cap. Two hundred cast-iron projectiles for target practice were cast in the foundry and finished in the machine shop. Other important items of work done in the shops were the manufacture of targets and parts of targets for seacoast artillery practice, the repair of parts for seacoast armament, and re-tiring ammunition truck wheels.

The disbursements for the year, exclusive of sales and deposits, amounted to $76,849.77. The number of receipts and issues of ordnance stores during the year was 845. The stores received on quartermaster's bill of lading amounted to 716,446 pounds; the stores issued amounted to 1,416,676 pounds.

BENICIA ARSENAL.

This arsenal was commanded during the year by Lieut. Col. C. L'H. Ruggles, who is also ordnance officer of the Western Department and armament officer of the Western Armament District.

This arsenal is the depot of supply for the Regular troops and the Organized Militia within the territorial limits of the Western and Hawaiian Departments. The principal items of work done in the shops during the year were the modification of armor-piercing projectiles; the manufacture of targets and target material for seacoast artillery, mobile artillery, and small-arms target practice; the assembling of powder charges and fixed ammunition; and the manufacture of parts required for repairs and replacements of seacoast artillery matériel.

The main storehouse at this arsenal and its contents were destroyed by fire on October 18, 1912, entailing a loss of approximately $1,571,000. While the origin of the fire is uncertain, it emphasizes the need of additional fire protection. The sundry civil act for the fiscal year 1914 carries an appropriation of $6,000 providing for the installation of an automatic sprinkler system in the present main storehouse. The same act carries an appropriation for reconstructing the ruins of the burned storehouse into a building which will be used for storage purposes. The need of additional storage facilities at this arsenal has long been felt, but particularly since the destruction of the main storehouse by fire. Estimates have been submitted for a new general storehouse and a new and enlarged oil house.

The disbursements for the year amounted to $141,217.98. The number of requisitions received from the service during the year was 1,847. The number of bills of lading issued during the year was 1,146, and the weight of the stores issued was 6,053,637 pounds. The weight of the stores received was 6,076,018 pounds.

SAN ANTONIO ARSENAL.

This arsenal was commanded from July 1, 1912, to December 20, 1912, by Col. Charles H. Clark, and from December 21, 1912, to the end of the fiscal year by Maj. J. H. Rice. The commanding officer of this arsenal is also in charge of a field artillery district and has, since February 15, 1913, been ordnance officer of the Southern Department.

The arsenal has supplied the troops in the Southern Department with ordnance and ordnance stores, including the Second Division, which went into camp at Galveston and Texas City in the latter part of February.

PICATINNY ARSENAL.

This arsenal was commanded during the year by Lt. Col. Odus C. Horney. The Army powder factory is located at this arsenal, which is also a depot for the storage and preparation of powder, ammunition, and high explosives. Approximately 415,000 pounds of cannon powder and 133,000 pounds of caliber .30 and other small-grained powders were manufactured during the year.

A new powder dry house, to replace one destroyed by fire on April 26, 1912, is being erected and will be completed within the next few months. It will be of hollow-tile and steel construction. While it would probably be seriously injured, if not entirely destroyed, by the burning of a considerable quantity of powder stored in it, there would be no danger from flying fragments of burning wood as exists in the case of other dry houses. The work of cutting down and manufacturing into railroad ties the dead and dying chestnut timber on the reservation has been going on continuously during the year.

The total disbursements of the arsenal during the year amounted to $425,505.42; the number of cash vouchers was 1,128; the number of receipts and issues of ordnance stores was 850; the weight of stores issued and received, exclusive of building materials and materials for manufacturing purposes, was 14,188,003 pounds. The number of employees on June 30, 1913, was 371.

MANILA ORDNANCE DEPOT.

The depot was commanded by Lieut. Col. J. W. Joyes from the beginning of the fiscal year until March 17, 1913, and since that date to the close of the fiscal year by Maj. H. W. Schull. The commanding officer of the depot is also ordnance officer of the Philippine Department, armament officer of the Philippine Armament District, and a member of the Defense Board of the Philippine Islands.

Volume of business.—One thousand six hundred and thirty-eight ordnance property returns were received and given preliminary examination, all irregularities being investigated by correspondence. The number of vouchers for stores issued was 1,323; and for stores received, 650. The weight of the stores issued amounted to 5,392,459 pounds, and that of stores received to 3,169,423 pounds.

Disbursements.—The total amount of funds disbursed, transferred, etc., at the depot during the fiscal year was $125,856.42; the sales of ordnance and ordnance stores during the year to officers, the insular government, and other departments amounted to $48,971.25.

Work at the depot.—The work of the past year has included the repairing of a large quantity of matériel turned in for that purpose, and the manufacture of targets and target material for small-arms, mobile, and seacoast artillery target practice; also miscellaneous stores for sale and issue. The installation and care of the seacoast armament have added largely to the labor and responsibility of the depot.

ORDNANCE BOARD.

The membership of the board on June 30, 1913, was as follows: Col. E. B. Babbitt and Maj. Jay E. Hoffer, Ordnance Department, and Maj. F. K. Fergusson, Coast Artillery Corps. Col. S. W. Roessler, Corps of Engineers, is a member on matters involving engineering work, and Lieut. Col. Samuel E. Reber, Signal Corps, is a member on matters connected with aeronautics.

The board, which is a permanent experimental body, during the year submitted 83 reports relating to guns and carriages, 9 relating to smokeless powders and explosives, 29 relating to fuzes and primers, 43 relating to projectiles, and 122 relating to sights, fire-control instruments, and miscellaneous objects.

Very respectfully,

WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.

The SECRETARY OF WAR.

REPORT OF THE [illegible]

REPORT OF THE CHIEF SIGNAL OFFICER.

War Department,
Office of the Chief Signal Officer,
Washington, October 10, 1913.

Sir: I have the honor to submit my annual report of the operations of the Signal Corps of the Army for the fiscal year ended June 30, 1913.

On February 13, 1913, my predecessor, Brig. Gen. James Allen, was retired from active duty by operation of law, after having served with fidelity and great distinction for more than seven years as Chief Signal Officer of the Army. On March 5, 1913, I assumed the duties of the position.

Before proceeding to report upon the operations of the past year, I desire to submit a brief review of the conditions affecting the work imposed upon the Signal Corps of the Army at the present time when its duties are most exacting; the theater of its operations widely extended; and when the march of military science is so rapidly progressing that a technical corps, such as the Signal Corps, charged with the collection and transmission of military information, must use its utmost endeavor to keep up with the progress of ideas. To advance and to properly perform the duties imposed upon it, this corps should be provided with a personnel of trained men sufficient in number and skill to carry on its work in widely scattered regions, both at home and abroad—in the Philippines, in Hawaii, at all times in the field, now in Alaska,[1] and presently in Panama. In these theaters of operation the corps is called upon to furnish the means of transmission of information for 90,598 men of the Army on a regular footing, and should war arise to make provision for the signal equipment for an army presumably large but indeterminate before the event; it is required to build and maintain field and garrison lines of telegraph, buzzer, and telephone; to establish and operate at all times fixed radio stations; to devise and use radio apparatus for the field; to supervise the manufacture of and to lay and operate cables; to manage cable ships; to maintain and use field companies for tactical purposes; to organize telegraph platoons for practical use; to build up a respectable aeronautical organization for the Army; and to perform many other duties.

These duties are multifarious and are far too onerous and difficult to be performed in their full requirement by the 1,212 men and 46 officers now allowed the Signal Corps for its work.

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[1] Note.—It is hoped that the Post Office Department of the Government will take over the cable and telegraph lines and the radio stations in Alaska.

Nevertheless the work has been performed, it is hoped, satisfactorily, but at a cost of heavy effort and increased expense in time and money and of lack of completeness; for it is certain that the great field of usefulness lying before the Signal Corps can not be worked to its full extent with the present force for lack of men and for lack of means. Although the corps can, and does, hold what it has gained of usefulness to the Army, it is not encouraged to feel that it is empowered to push on along the road of progress which the steady advance in electricity, in the mechanical arts, and in the navigation of the air marks out, but is compelled to creep slowly forward—if not to remain stationary.

It is obvious to those interested in the transmission of military information that the personnel of the Signal Corps is too small for the proper performance of the important and growing work before it. The field of endeavor is steadily increasing; and almost daily the changes in the mechanical uses of electricity bring out something new in its application to the transmission of information as applied to the purposes of war.

It is probably true, as has been said, that the art of war has not changed with the years; and though the science of war has changed mightily, the difference between the military science of to-day and that of 50 years ago is largely a difference caused by the instantaneous knowledge of events as they occur to-day and the slow groping in the dark of the contending forces of former years, a difference due to the immediate and constant transmission of military information—the duty of the Signal Corps of the Army.

An increase in the personnel, especially of the enlisted force of the corps, is therefore recommended. The character of this increase and other recommendations for betterment of the corps are submitted at the conclusion of this report, and are respectfully but earnestly urged for adoption.

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I. OPERATIONS OF THE SIGNAL CORPS IN ALASKA, THE PHILIPPINE ISLANDS, HAWAII, AND THE UNITED STATES.

ALASKA.

The construction of the Washington-Alaska military cable and telegraph system was begun in 1900 by the Signal Corps of the Army as a military measure, in order first to connect the scattered posts already established in Alaska, and later, by means of a cable from Seattle, to obviate the necessity of sending orders and instructions over a telegraph line through foreign territory; that is, by the Canadian line via Ashcroft and Dawson.

The construction and maintenance of this system in the years that have since elapsed show a record of bravery, pluck, and endurance on the part of the Army deserving of the greatest credit. The difficulties overcome were tremendous, and the hardships and risks encountered by officers and soldiers are worthy not only of high commendation but of a place in the annals of the country. Undoubtedly the work has been of great value to the people of the Territory and has helped materially to develop its resources; but the time has now arrived when these lines have little worth for military purposes, and as a consequence the War Department has requested the Post Office Department to take over the system. It is hoped that this transfer may, with the consent of Congress, be effected during the coming winter and some 200 enlisted men and 5 officers be returned to the Signal Corps for duty more properly military, and the expenditure charged against the military establishment be considerably lessened.

The Washington-Alaska military cable and telegraph system now embraces 2,635.95 miles of submarine cable, 1,047.5 miles of land lines, and 10 radio stations.

The cable system handled in a satisfactory manner the large volume of business sent over it, as did the land lines and radio stations. The interruptions on the submarine cables were confined to the Seattle-Sitka, Sitka-Valdez, and Fanshaw-Wrangell cables. These interruptions were all quickly repaired, with one exception, when the fact that the cable ship *Burnside* was in dry dock being fitted with new boilers necessitated the employment of other means of repair that were not as expeditious. All business was handled promptly, being routed during interruptions of the submarine cable via the naval radio stations and the Dominion lines via Egbert.

The interruptions to land lines were very few and entailed no inconvenience on the public. They were generally caused by the break-up on the Yukon, forest fires, and snowslides. There was no day on which through communication over the land lines was not possible some time during the day.

The radio stations were in practically uninterrupted operation and were of material assistance in maintaining communication when breaks in the land lines occurred.

The total "this-line" receipts during the year were $183,769.07. "Other-line" receipts amounting to $33,730.77 were collected and turned over to commercial companies. Official messages to the value of $180,677.23 were handled. This is an increase over 1912 in the total money value of business handled for the year of $7,012.85. Telegraphic money transfers to the value of $46,158.66 were effected, the tolls therefrom, exclusive of message tolls, amounting to $542. There were no losses to the Signal Corps in the handling of this large amount of money, and this fact reflects credit on the enlisted personnel of the Army.

The only changes in the number of telegraph offices operated were the opening of the station at Hadley on April 13, 1913, and the closing of the Rapids station on June 21, 1913. The consolidation of the third and fourth sections, to be hereafter designated as the third section, has been authorized and will be effected early in the fiscal year 1914. This will make it unnecessary to station an officer at St. Michael in charge of what was heretofore the fourth section.

The temporary office opened at Thompsons Pass, on the first section of this system, by authority of the Secretary of War, was closed on April 15, 1913; it had been of great value to the traveling public as well as to the men and animals of the Signal Corps during the winter. In view of the fact that this station is required only for short periods and is used principally as a test station in connection with the repair and maintenance of the line, authority has been secured from the Secretary of War to open and close the station when desirable without securing authority in each case.

The duties of the several officers in charge have been satisfactorily performed. It has been suggested that it would be well to transfer to them the duty of supplying the men in their respective sections instead of having this attended to by the Quartermaster Corps. Inasmuch as the officers in charge are in much closer touch with the needs of the telegraph stations, it is thought that this change will be beneficial, and an investigation is now being undertaken to ascertain whether from the viewpoint of the Signal Corps the change is advisable.

On April 17, 1913, the Judge Advocate General decided that items of transportation in connection with the improvements on the Alaskan system were a proper charge against "Extensions and betterments of the Washington-Alaska military cable and telegraph system." As such expenses have heretofore been borne by the Quartermaster Corps, it is feared that this will result in a curtailment of the improvements which would have been made on the Alaskan system each year. The exact amount involved has not as yet been ascertained.

On March 10, 1913, the Secretary of War, through the governor of the Territory of Alaska, authorized the members of the First Alaskan Legislature to send messages on official business without charge over military cable and telegraph lines in Alaska. This resulted in a decided increase in the amount of official business handled.

Below is given a list of stations and distances corrected to date:

Stations.	Intermediate.	Total.
LAND LINES.		
Valdez-St. Michael:	*Miles.*	*Miles.*
Valdez	0	0
Wortmans	18.5	18.5
Saina, relief cabin	14	32.5
Beaver Dam	8	40.5
Stewart Creek, relief cabin	6	46.5
Teikhell	10	56.5
Kimball Pass, relief cabin	14	70.5
Tonsina	10	80.5
Copper Center	22	102.5
Gulkana	25	127.5
Hogans	30	157.5
Paxsons	29	186.5
McCallum	20	206.5
McCallum, relief cabin	18	224.5
Donnely	18	242.5
Dome, relief cabin	18	260.5
McCarty	18	278.5
Shaw Creek, relief cabin	14	292.5
Richardson	9	301.5
Delta	14	315.5
Overland, relief cabin	10	325.5
Salcha	16	341.5
Salcha, relief cabin	15.3	356.8
Fairbanks	16.7	373.5
Chena	10	383.5
Monument Point, relief cabin	20	403.5
Nenana	17	420.5
Nenana Mission, relief cabin	11	431.5
Minto	17	448.5
Minto, relief cabin	20	468.5
Tolovana	12	480.5
Hot Springs	32	512.5
Fort Gibbon	48	560.5
Birches	51	611.5
Kokrines	38	649.5
Melozi	37	686.5
Louden	29	715.5
Koyukuk	50	765.5
Nulato	20	785.5
Kaltag	37	822.5
Old Woman	50	872.5
Schroske, relief cabin	22	894.5
Unalakleet	18	912.5
Coal·Mine, relief cabin	11	923.5
Golsova	13	936.5
Klickaterick (Kikrtaguk) relief cabin	14	950.5
Fort St. Michael	28	978.5
St. Michael, radio	1	979.5
Hot Springs-Rampart:		
Hot Springs	0	979.5
Eureka	22	1,001.5
Rampart	28	1,029.5
Egbert-Boundary:		
Fort Egbert, radio	0	1,029.5
Fort Egbert, city office	1	1,030.5
Boundary	12	1,042.5
Gibbon loop: Gibbon, radio loop to local office	.25	1,042.75
Nulato loop: Nulato, radio loop to local office	.25	1,043
Nome-Fort Davis:		
Nome, radio	0	1,043
Nome, city office	0.5	1,043.5
Fort Davis	4	1,047.5
CABLES.		
Seattle-Seward:		
Seattle	0	0
Sitka	1,088.3	1,088.3
Valdez	601.2	1,689.5
Fort Liscum	4	1,693.5
Seward	196.4	1,889.9
Montague Island-Cordova Cape Whitshed	68.5	1,958.4
Sitka-Skagway:		
Sitka	0	1,958.4
Cape Fanshaw (no station)	211.7	2,170.1
Juneau	98	2,268.1
Haines	106.7	2,374.8
Skagway	17.9	2,392.7
Juneau-Douglas	2.8	2,395.5

Stations.	Intermediate.	Total.
CABLES—continued.		
Cape Fanshaw-Ketchikan:	*Miles.*	*Miles.*
Cape Fanshaw (no station)	0	2,395.5
Wrangell	74.1	2,469.6
Ketchikan	113.1	2,582.7
Lawton-Worden:		
Fort Lawton	0	2,582.7
Fort Worden	40.4	2,623.1
Ward-Lawton:		
Fort Ward	0	2,623.1
Fort Lawton	12.5	2,635.6
Sitka-Japonski Island:		
Sitka	0	2,635.6
Japonski Island	.35	2,635.95
RADIO.		
Egbert-Circle	110	
Circle-Fairbanks	126	
Egbert-Fairbanks	197	
Fairbanks-Gibbon	130	
Gibbon-St. Michael	330	
Nome-St. Michael	127	
St. Michael-Kotlik	52	
Kotlik-Nome	139	
Petersburg-Wrangell	30	
Fairbanks-Nulato	305	
Gibbon-Nome	400	
Gibbon-Nulato	181	
Gibbon-Circle	232	
Gibbon-Egbert	320	
St. Michael-Nulato	150	
Nome-Nulato	121	
Nome-St. Paul Island (naval)	558	
Nulato-Kotlik	214	
St. Michael-Nulato	150	

RECAPITULATION.	Miles.
Land lines	1,047.5
Cables	2,635.95
Total	3,683.45

Radio stations, 10.

EXTENSIONS AND BETTERMENTS.

The most important work undertaken by the Signal Corps during the fiscal year 1913 looking to the betterment of the land lines in Alaska was the construction of a cut-off from Fort Gibbon to Hot Springs. This work was begun on September 29, 1912, and was completed, after having been suspended at intervals on account of the unfavorable weather conditions, on June 14, 1913. The new line follows American Creek and reduces the distance from Valdez to St. Michael by 76 miles. The line from Fort Gibbon to Rampart was abandoned and the Rapids station closed, as stated above. All business for Rampart is now relayed at Hot Springs. Extensive improvements were made in the line on all sections, consisting of straightening, strengthening, or replacing poles, building bridges, putting in new spans, cutting out detours, as well as removing the danger of forest fires by cutting down near-by trees, and such improvements in the living condition of the enlisted men as it is possible to effect.

CABLE SYSTEM.

The 150 miles of "deep-sea" type and 30 miles of the "intermediate" type cable referred to in the Chief Signal Officer's report for the fiscal year 1912 have been delivered, and the question of laying it is being taken up. The Secretary of War has authorized the abandonment of the cable tank at Tacoma, and action to that end will be taken as soon as the new tank authorized to be constructed at Seattle is completed. The advantages of this change of location are evident.

RADIO.

The Signal Corps radio stations in Alaska, constructed principally with a view to supplementing the land-line service, have fully justified this course, and have given efficient service whenever called on. The plan has been adopted of routing a certain amount of business each day by way of the radio, thus insuring that stations are kept in working condition and ready at any time to take up the work of handling the business of the entire system between the points at which they are located.

No new installations have been undertaken and none have been discontinued.

The 1-kilowatt station at Kotlik, at the mouth of the Yukon River, was closed at the beginning of the winter season in September, 1912, and reopened for business in May, 1913.

Detailed statement of expenditures under Army appropriation act approved Mar. 3, 1911.

Appropriation		$125,000
1. For all radiotelegraph installations	$16,370.30	
2. Rebuilding and betterments to the millitary telegraph line between Nome and Paxson	37,486.03	
3. Rebuilding and betterments to the military telegraph lines between Valdez and Paxson, Gulkana, and Fort Egbert	8,849.00	
4. Extensions and betterments to the Alaskan cable system	62,294.67	
Total expenditures		125,000

Detailed statement of expenditures under Army appropriation act approved Aug. 24, 1912.

Appropriation		$50,000.00
2. Rebuilding and betterments to the military telegraph line between Nome and Paxson	$15,399.93	
4. Extension and betterments to the Alaskan cable system	7,000.00	
Total expenditures		22,399.93
Unexpended balance		27,600.07

The Army appropriation act, approved March 2, 1913, provides that of the receipts of the Washington-Alaska military cable and telegraph system that have been covered into the Treasury of the United States, the sum of $50,000 is appropriated until the close of the fiscal year 1915 for defraying the cost of such extensions and betterments of the system as may be approved by the Secretary of War.

TELEGRAPH RESERVATIONS.

During the fiscal year the following Executive orders pertaining to telegraph reservations in Alaska were issued:

Executive order dated July 3, 1912.

It is hereby ordered that a tract of land containing about 3 acres, on the left bank of Tanana River, just above its confluence with Delta River, Alaska, in approximate latitude 64° 09′ N. and longitude 145° 51′ W., and hereinafter described, be withdawn from settlement, location, or entry, and that same be, and is hereby, reserved for military purposes, subject to any existing rights thereto.

Description.—Beginning at a point where a stake has marked the northwest corner of the homestead claim of Alonzo L. Maxey, thence running south 350 feet to a point, thence east 400 feet to a point, thence north 290 feet to a point at the bank of Tanana River, thence westerly with the shore of the river to the point of beginning, to include the buildings of the McCarty United States Telegraph Station.

Executive order dated March 14, 1913.

The Executive order dated November 23, 1911 (G. O. No. 163, W. D., Dec. 8, 1911), placing under the control of the Secretary of the Interior, under the act of Congress approved July 5, 1884 (23 Stat., 103), for disposition under said act of Congress, or as may be otherwise provided by law, that portion of the right of way for military telegraph lines in Alaska reserved by Executive order dated May 24, 1905 (G. O. No. 83, W. D., June 5, 1905), which is located between Hot Springs and Fort Gibbon, Alaska, is hereby revoked; and the said premises are again reserved for the use of the Signal Corps in its operation of military telegraph lines in Alaska.

This was afterwards found to be in error in certain particulars, and detailed information as to the proper reservation will be submitted as soon as received, in order that the necessary corrections may be made.

Steps have been taken to turn back to the Department of the Interior the reservation at Rapids announced in Executive order of May 4, 1908.

CONDITION OF ENLISTED MEN.

The duties falling to the enlisted men of the Signal Corps during the fiscal year have been performed in a faithful and satisfactory manner. The average number on duty during the year was 242—208 in Alaska and 34 in the United States. The number on duty June 30, 1913, was 252. There were two deaths during the year—one by accidental shooting, the other by shooting, apparently with suicidal intent. There were but two desertions, one of the men being a confirmed inebriate.

PHILIPPINE ISLANDS—HAWAII.

PHILIPPINE ISLANDS.

July 1, 1912, the enlisted strength of this department totaled 156 men. During the year there was a loss of 64 and a gain of 41, leaving a total strength of 133 on June 30, 1913. Inclusive of the officer detailed on aviation work, there were 9 signal officers on duty at the close of the fiscal year 1913.

Post telephone systems were maintained during the year at the following posts: Camps Connell, Downes, Eldridge, Gregg, John Hay, McGrath, Stotsenburg, Ward Cheney, Fort Mills, Fort San Pedro, Fort William McKinley, Fort Wint, Cuartel de Espania, Regan Barracks, Warwick Barracks, Augur Barracks, Camp Keithley, Camp Overton, Ludlow Barracks, Pettit Barracks, and Torrey Barracks, with a total of 756 telephones. In addition, long-distance telephone lines were maintained between Cotabato and Reina Regente, Camps Overton and Keithley, and between Camp Vicars and Malabang in Mindanao. The work performed in connection with fire-control installation at seacoast defenses in the Philippines is referred to on page 27.

Radio telegraph stations were maintained and radio operators furnished at the following points: Manila, Corregidor Island, Grande Island, Carabao Island, El Fraile Island, Caballo Island, Fort William McKinley.

Operators were also furnished for the United States Army transports *Merritt* and *Warren.*

The 10-kilowatt station at Fort Mills, Corregidor Island, is reported as working excellently, and a great many messages are handled. The enlisted personnel is organized into two companies, one, Company F (a skeleton or base-line company) from which is drawn men on detached service and special duty, the other, field Company L.

GENERAL SUPPLY DEPOT AT MANILA.

The Signal Corps also maintains a general supply depot at Manila for the supply of equipment and material for the Philippine Islands and the troops serving at Tientsin, China. Equipment for the installation and maintenance of the fire-control installations in the Philippine Islands, radio equipment for the interisland and transport installations, and the complete reserve equipment for a Signal Corps field company are stored at this depot.

HAWAII.

Since the last annual report the fire-control installations in Hawaii have been completed and the garrison in that Territory greatly strengthened. Urgent need for Signal Corps organizations has been felt, and accordingly on June 5, 1913, Field Company E, Signal Corps, was sent from the Presidio of San Francisco, Cal., for station in Hawaii. In addition thereto a detachment of about 40 men has been sent to take care of general field telegraph and telephone construction work. One aeroplane section under command of a military aviator was detached from the aviation school at San Diego, Cal., and sent during June for station in Hawaii.

Since their arrival the Signal Corps officers have made investigation regarding adequate telegraph and telephone communications, and steps have been taken to supply the material for construction of the needed line and installation of apparatus. There is a wide field offered for signal work and ingenuity on an island whose coast line is bold and from which observations are far-reaching.

UNITED STATES.

The operation of the Signal Corps in the United States during the year was similar to those of previous years, and covered the management of military telegraph lines, the establishment of post telephone and buzzer annunciator target-range systems, the supplying of signal equipment to the Army and Organized Militia, the installation of fire-control systems for coast defenses, including the preliminary work connected with the equipment of the signal stations which are expected to be ready at all times to communicate with vessels of the Navy by means of Ardois and other methods of signaling. The Signal Corps has also carried forward the work of enlisting and training of recruits in visual, electrical, and telephone matters, electrical and other experimental work, and active and suitable training in preparing the corps for war and other emergencies. Radio sets have also been installed on the quartermaster transports.

SIGNAL CORPS POSTS AND DEPOTS.

The posts of Fort Omaha, Nebr., and Fort Wood, N. Y., were garrisoned exclusively by the Signal Corps, as was the case during the preceding year. The garrison at Fort Omaha consists of Companies A, B, and H, while the post of Fort Wood is garrisoned by Company G, Signal Corps. The course of instruction for enlisted men embraces the following subjects: Electricity, telephony, telegraphy, radiotelegraphy, line-construction work, and special instruction in telegraphic accounts and property accountability to prepare men for assignment to duty in Alaska. It is contemplated to abandon Fort Omaha as a Signal Corps post. (As a matter of fact, this post was so abandoned and the garrison removed to Fort Leavenworth before this report was sent to print, the balloon house, gas-generating plant, and radio station remaining at Fort Omaha under the charge of the Signal Corps, however.)

The completion of the new radio installations at Fort Wood, including a quenched spark transmitting set, will enable the course of instruction in radiotelegraphy at that school to comprise the latest developments in the art.

GENERAL DEPOTS OF SUPPLY.

The three general supply depots of the Signal Corps were still located during the year at Fort Wood, N. Y., Fort Omaha, Nebr., and Fort Mason, Cal. The efficient organization at these depots has enabled them to meet all demands promptly and satisfactorily. Fort Omaha now carries only material for the mobile army, all fire-control material having been transferred to the other two depots. The total weight of material received at and shipped from the depots during the year aggregated 3,151,734 pounds.

It is anticipated that the depot at Fort Omaha will shortly be moved to one of the quartermaster storehouses in the city of Omaha. This will facilitate the handling of freight and greatly reduce the expense of hauling. (This was later accomplished.)

The old storeroom of the Mason Depot was relinquished, and all Signal Corps stores, including cable, were transferred to a new location on the transport dock at Fort Mason. The material moved aggregated 1,087,159 pounds, comprising 9,395 packages, boxes, and crates.

The reserve equipments for field and telegraph companies at the depots have been held intact throughout the year. These equipments are completed, with the exception of certain articles which deteriorate if held in storage, but these are available for immediate issue.

The card record of available stock at depots, maintained in the office of the Chief Signal Officer in order that it may be known at all times exactly what is available in the depots, has continued in use as the property record of the depots. This scheme is working with complete success and to the entire satisfaction of all concerned.

ARMY SIGNAL SCHOOL.

The Army Signal School at Fort Leavenworth, Kans., in June closed another very successful year. Nine student officers were graduated, and report shows that the interest was maintained which line officers detailed to this school have always shown in the school and the Signal Corps.

Three instructors assisted in conducting the course, and four enlisted men of the Signal Corps assisted in the laboratory, care of property, and in clerical work.

Field Company D, Signal Corps, which is one of the most important auxiliaries of the school, was ordered to the divisional camp at Texas City, Tex., in February and has remained absent until the present time. In order to give the school the benefit of field training with such an organization, Field Company A, Signal Corps, marched from Fort Omaha, Nebr., to Fort Leavenworth in May and remained through June, assisting in practical field problems with the Army Signal School.

REMOVAL OF SIGNAL CORPS COMMAND FROM FORT OMAHA TO FORT LEAVENWORTH.

In accordance with the provisions of paragraph 21, Special Orders 163, War Department, July 15, 1913, the Signal Corps garrison has been withdrawn from Fort Omaha, Nebr., and the Signal Corps general supply depot transferred to the city of Omaha. The aeronautical plant and the radiotelegraph station at Fort Omaha will remain under the direction of the Signal Corps.

Energetic measures have been undertaken to assemble every available Signal Corps man at Fort Leavenworth to permit the organization there of a telegraph company, it being contemplated that one or perhaps two platoons of such company should serve at that place in connection with the service schools. The school for enlisted men will be organized at Fort Leavenworth. Field Company A, the telegraph company, and the enlisted men's school will be placed under the immediate supervision of the commandant, Army Service Schools, and the work will be carried on by the director, Army Signal School. It is thought that by consolidating all of the instruction work under one responsible head much good will be accomplished and that all the schools there will benefit by the cooperation thus rendered possible.

CABLE SHIPS.

The Signal Corps has continued to operate the three cable ships—the *Burnside*, the *Joseph Henry*, and the *Cyrus W. Field*—all of which were kept actively engaged during the year in the maintenance of the Alaskan and fire-control cables, with the exception of the period from April 15 to June 30, during which the *Burnside* was in dry dock undergoing extensive repairs, which included the installation of oil-burning boilers.

On account of the fact that the *Burnside* was out of commission a small steamer, the *Rapid Transit*, was hired between May 1 and 6 and the portable cable engine and machine from the *Burnside* was installed thereon. With this equipment the cable No. 48, between Seattle and Sitka, was repaired about 10 miles north of Fort Worden. On May 8 the cable crew of the *Burnside* proceeded by rail to Fort Stevens, Oreg., taking the portable equipment with it, and repaired a break in cable No. 285 between Fort Stevens and Fort Columbia. The use of the portable cable machine in this manner has resulted in large savings to the Government.

The cable ships *Joseph Henry* and *Cyrus W. Field* were engaged during the year not only in the maintenance of cable systems but in the construction and repair of the radio stations within the eastern department and in overhauling the reserve of cable in the various coast-defense commands and at Fort Wood, N. Y. In addition the ships moved while on cable-repair trips over 600,000 pounds of cable and supplies and returned to the depot a large number of empty reels, effecting a considerable saving to the Quartermaster Corps. The *Joseph Henry* steamed 5,449 nautical miles, the *Cyrus W. Field* 4,989. Six new cables were laid, 5 recovered, and 20 repaired in the eastern department.

On account of the urgent need for Signal Corps officers and men it has been recommended to the Secretary of War that the cable boat *Cyrus W. Field* be put out of commission. The cable machinery will be allowed to remain aboard the boat to provide against an emergency arising necessitating the use of the boat for submarine cable work. The *Field* will be held at the Fort Wood dock and the equipment removed so stored at the depot that the boat can be placed in commission within a week or two.

MILITARY TELEGRAPH LINES IN THE UNITED STATES.

On January 14, 1913, the post of Fort Huachuca, Ariz., was looped in on the Western Union Telegraph Co. line, thus completing the abandonment of the former military telegraph line from Fort Huachuca to Huachuca Siding and Lewis Springs.

This leaves but one telegraph line in the United States proper on which the Signal Corps collects "this line" receipts for business handled. This line is between Fort Apache and Holbrook.

FORT APACHE-HOLBROOK.

In July, 1912, an agreement was reached with the Agriculture Department that the military authorities would keep in repair that portion of the Fort Apache-Holbrook line between the fort and the northern boundary of the White Mountain Indian Reservation, a point about 4 miles north of Cooley's ranch, and that the Department of Agriculture would keep the line in repair from that point to Holbrook. This agreement was made in view of the fact that permission had been given the Agriculture Department to use this line for telephone circuits in connection with the work of the forest supervisors in this vicinity.

This line receipts, amounting to $506.76, were collected and deposited to the credit of the Treasurer of the United States. Other line receipts amounting to $4,165.26 were turned over to commercial companies. These figures do not include other line earnings collected and turned over to commercial companies at offices on telegraph loops where the Signal Corps collects no "this line" receipts. There were about 60 such offices at the beginning of the fiscal year 1913, and during the year 32,220 official messages were handled by them.

With the approval of the Secretary of War, steps are being taken to withdraw Signal Corps telegraph operators at most of these posts, leaving the messages to be transmitted from the commercial telegraph office to the post by telephone.

YELLOWSTONE NATIONAL PARK.

A telephone system consisting of over 100 miles, maintained by the Signal Corps at the present time in the Yellowstone National Park, has been reported as being in an unsatisfactory condition. An investigation of the subject shows that there are three kinds of lines in the park: First, Signal Corps wires on Signal Corps poles; second, Signal Corps wires on commercial poles; and, third, commercial wires on Signal Corps poles. The Signal Corps lines had been built up mainly from small lots of material furnished from time to time and not in accordance with any carefully prearranged plan to provide a complete and efficient telephone system. The maintenance of this system has never been considered a proper charge against War Department appropriations, and only such material has been provided as was required to furnish necessary means of communication between the several detachments of enlisted men that had been assigned to duty there. It has become evident that the only method of providing satisfactory communication in some portions of the park is by means of an underground cable, which can not be interrupted by snowslides.

Yellowstone Park is under the control of the Interior Department, and it is thought that an efficient telephone system for the protection thereof is a proper charge against the appropriations made to that department for the preservation and protection of Government reservations. With the approval of the Secretary of War, steps have therefore been taken to turn over to the Interior Department the lines installed by the Signal Corps, with the understanding that the Interior Department will place the system on an efficient basis and hereafter maintain it.

FIELD AND TELEGRAPH COMPANIES.

General Orders, No. 24, War Department, February 17, 1911, provide for the organization of field companies, and Field Service Regulations of 1913 have recognized the use and importance of these companies. The field companies are organizations for tactical purposes, using the buzzer, telephone, and radio.

It is believed that the Signal Corps field company of the Army represents the best development of the service of information now existing. They are composed each of 4 officers, mounted, and 96 men, 81 of whom are mounted, and given transportation consisting of 4 carts of special construction, each carrying 5 miles of field wire for use with the buzzer; 2 instrument wagons and 1 kit wagon, 2 field wagons, each carrying 10 miles of wire as a reserve, 85 saddle horses, 8 draft horses and 20 draft mules. The field radio is carried by 8 pack mules. The field companies are designed primarily for combat purposes and for use in deployments. They have, however, during the past year been necessarily used to provide communication lines of information for troops in the field, especially on the southern border, and have proved most valuable not only in communicating by wire but by the pack radio. The latest pattern of this apparatus is proving most excellent in service. A radio pack set can be put in operation in two minutes, weighs 370 pounds, and under service conditions has a range of 25 miles.

It seems probable that the number of radio sets allowed a field company should be increased to four, in order that on the march, for instance, in advancing the rear station the radio should not be out of commission; with three sets the leap-frog procedure does not stop communications. The fourth set should remain in reserve or at the nearest base station. Should an increased number of radio sets for the organization be decided upon, however, it appears that the field company will be so increased in size that it may become necessary to divide it into two companies—one wire company, the second a radio company, each of four sections, thus forming a battalion.

To the present field company is frequently added a wagon radio set of 2 kilowatts power, with a range of more than 200 miles overland. This set is made up of a pintle-type wagon, drawn by four animals, the rear cart containing the power plant and the front the operating apparatus. Their number will be increased. It is believed that a wagon radio set should be attached to the baggage trains of headquarters, especially of an expeditionary force.

Two of the field companies are now in Texas, one with the second division at Texas City, a second scattered along the border from Fort Bliss. The third field company is at the school at Fort Leavenworth; the fourth in Hawaii; the fifth in the Philippines. The number of these companies should be at least doubled. At present there are none available for service on the Pacific coast, nor east of the Allegheny Mountains. They are not only convenient and useful organizations at all times, but are vital to the Army in actual service. The field companies, however, as is obvious from their equipment, are for tactical use and should not be employed to join a command with its base; to tie the various units together in camp or cantonment, or to connect an expeditionary force with the coast, or the permanent telegraph systems of the country. These duties should be performed by an organization known as the telegraph company.

THE TELEGRAPH COMPANY.

To these companies fall the duties of establishing semipermanent telegraph lines, telephone lines, and installations in camp and cantonment, and constructing and maintaining telephone systems for divisions. This company, established by G. O. No. 55, W. D., September 15, 1913, as a unit of the Signal Corps, supplements the field company and takes its place in camp, cantonment, or from the advance to the rear by maintaining communication with the base, railway stations, and the permanent lines of telegraph or cable of the country traversed. It constructs general lance, or flying, lines for use of telegraph or telephone.

The normal telegraph company consists of six sections, three equipped for camp telephone work and three for field telegraph work. A company as now organized consists of 4 officers and 139 enlisted men. It is provided with 6 lance trucks, 3 telegraph wagons, 6 telephone wagons, 2 repair wagons, 3 field wagons, 43 saddle horses, and 80 draft mules. The telegraph company is equipped with sufficient wire to run about 125 miles of line and to establish 60 telephone and 10 telegraph stations. These, of course, can be increased with added transportation. It is a most useful and businesslike organization and should be the first sent out in the establishment of the permanent encampments so commonly used as training camps.

The telegraph company is, of course, so large a unit that it will, as a rule, be subdivided into platoons or sections. The unit is the section, or one telegraph and one telephone section forming a platoon. The organization of the telegraph company in full has been greatly hampered by lack of horses and mules. The technical material is on hand, but, obviously, without animals the company can not be put in the field. This organization is badly needed at the present time.

Boards of signal officers have carefully prepared special supply tables and these supplies are on hand, so that everything is ready to proceed with the organization and equipment of one or more of these companies.

There already exist detachments, one in the camp at Texas City, Tex., and one in Hawaii, which are in fact dismounted platoons of these telegraph companies, and it is contemplated to organize at least one such company, with headquarters at Fort Leavenworth or elsewhere, completely equipped for proper drill and use where required, when the necessary animals can be obtained.

FIRE-CONTROL EQUIPMENT FOR FIELD ARTILLERY.

General Orders, No. 15, War Department, 1913, prescribing the equipment for Field Artillery organizations eliminated the standard 2-foot kit, substituting therefor the semaphore flag kit designed by the Field Artillery board at Fort Riley, Kans. Order for a supply of these kits sufficient to equip all organizations of the Field Artillery was placed and will shortly be delivered. As soon as received at the depots, the number authorized for each organization will be shipped without awaiting the formality of a requisition.

The new type EE field glass, which the Field Artillery board has examined and considers preferable to the type E glass, differs from the latter in that each barrel has a separate focusing adjustment. The Signal Corps has not sufficient funds to purchase the number of type EE glasses required to replace the types B and E glasses now in use, but the latter will be withdrawn as they become unserviceable and the type EE glasses supplied as quickly as possible.

Further improvements in the Field Artillery telephone are embodied in the latest 1912 model. This telephone is meeting with universal commendation.

FIELD GLASSES.

An estimate for an appropriation of $25,000 has been submitted for field glasses to equip the noncommissioned officers of the Infantry and Cavalry. The glass to be purchased for such issue will be designated type F, and the limited appropriation asked for is only sufficient to supply about half the number that will be required.

FIRE-CONTROL INSTALLATIONS AT COAST-DEFENSE COMMANDS.

UNITED STATES.

Coast defenses of Portland.—The new motor-driven time-interval apparatus, together with the switching panel, etc., were installed in switchboard rooms at Forts Williams, Levett, and McKinley. Batteries De Hart and Sullivan at Fort Williams were completely rewired.

Coast defenses of Boston.—The new motor-driven, time-interval apparatus, together with the switching panel, etc., were installed in the switchboard rooms at all the posts in this district. Battery Lincoln, Fort Banks, was rewired and zone signals installed. All serial telephone cables at this post were replaced by subterranean cables installed in conduits. At Fort Andrews telephone lines and instruments were installed for new searchlight and the construction of the new underground post telephone system initiated.

Coast defenses of Long Island Sound.—Zone signal equipment was installed in mortar batteries Clinton, Fort H. G. Wright, and Stoneman, Fort Terry. The aerial cables of the post telephone systems at these two posts were replaced by subterranean cable in conduit. New motor-driven time-interval apparatus and switching panels, etc., were also installed in the switchboard rooms at each post in this district.

Coast defenses of Eastern New York.—The new motor-driven time-interval apparatus and switching panel, etc., were installed in the switchboard rooms of this coast-defense command.

Coast defenses of Southern New York.—The new time-interval apparatus, together with switching panels, etc., were installed at the three posts in this coast-defense command. At Fort Hamilton a larger part of the telephone lines was reconstructed.

Coast defenses of Delaware.—At Fort Mott the post telephone system was completely reconstructed and the overhauling of the fire-control system at both Fort Mott and Fort Delaware initiated.

Coast defenses of Baltimore.—The new motor-driven time-interval apparatus, together with the switching panels, etc., was installed in the switchboard rooms at the various posts in this coast-defense command.

Coast defenses of the Potomac.—The new motor-driven time-interval apparatus, together with switching panels, etc., was installed at Fort Washington.

Coast defenses of the Chesapeake.—Preparations for the installation of the new fire-control system in this coast-defense command were completed and practically all the material for same assembled and shipped to Fort Monroe during the early part of the year, but on account of the batteries, stations, and conduit system not being in readiness to receive the signal corps equipment, the work on this installation could not be started during the year. (It was started about the middle of September and is in progress as this report goes to print.)

Coast defenses of the Savannah.—A new temporary fire-control system was installed in this coast-defense command, which embodied a large amount of equipment used for standard fire-control installations. At Forts Caswell and Morgan, coast defenses of Cape Fear and Mobile, arrester cabinets for the post telephone switchboard were provided and installed.

Coast defenses of San Francisco.—A complete standard post telephone system was installed at Fort Winfield Scott, Cal., and large extensions to the post telephone system at Fort Mason accomplished.

The standard underground post telephone system at Fort Barry was also completed during this year.

Changes were made in the telephones and wiring at Battery Saffold, Fort Winfield Scott, and at searchlight No. 11, Point Cavallo, Fort Baker.

The new motor-driven time-interval apparatus, together with the switching panel, etc., were installed in the switchboard rooms in the various posts of this coast-defense command.

Coast defenses of the Columbia.—The new motor-driven time-interval apparatus, together with the switching panel, etc., were installed in the switchboard rooms at the various posts in this coast-defense command.

Coast defenses of Puget Sound.—The new motor-driven time-interval apparatus, together with the switching panel, etc., were installed in the switchboard rooms of the various posts of this coast-defense command.

A new local battery post telephone system was also installed at Fort Ward, Wash.

HAWAIIAN ISLANDS.

Department of Oahu.—The installation of the fire-control system in this department was continued throughout the year.

At Fort De Russy the fire-control system was practically completed and turned over to the post authorities during the month of May. The post telephone system at this post was almost completed, and it is expected it will be turned over to the post authorities during the month of July.

Fort Kamehameha.—The fire-control installation was practically 75 per cent complete and plans and estimates for the post telephone system at this post are being prepared.

The Signal Corps work in this department is necessarily slow on account of certain structural details over which the Signal Corps has no control.

PHILIPPINE ISLANDS.

Philippine Department, coast defenses of Subig Bay.—The fire-control installation at Fort Wint, Grande Island, in this coast-defense command, were completed and transferred to the Artillery in September. The post telephone system was also completed and turned over at this time, together with all records, etc., for both systems.

Coast defenses of Manila Bay.—It was necessary to make certain changes in the fire-control installations at Fort Mills, Corregidor, reported complete in the last annual report, due to climatic conditions which were not thoroughly understood at the time the installation was made. The ravages of insects have necessitated the removal and replacing of many boxes and cabinets. A new switchboard room was completed and occupied. This switchboard room is larger and much better suited to the conditions than the old one, and contains a separate room intended for the post telephone exchange.

The Burry typewriter-telegraph set sent to Fort Mills for test was installed, tested, and reported upon. The use of this type of typewriter-telegraph instrument is not recommended.

Complete data for the new permanent post telephone system to replace the present local battery, temporary installation, has been received and the plans and estimates for the new system are now being prepared.

A provisional system for the mine command and searchlights was installed at Fort Hughes, but no work was done at either Forts Drumm or Frank. The structural work at these posts was not completed sufficiently to enable the Signal Corps to take up its installation.

Plans and estimates for the permanent installations at the three posts mentioned above were compiled and steps are being taken to provide the necessary equipment.

The fire-control work in the Philippines has been slow but has progressed as rapidly as the structural details would allow. The ravages of insects have been a serious handicap and has required the replacement of instruments and wiring in a number of stations. New metal-case instruments are being designed which will be as far as possible insect proof, and it is believed that this will obviate considerable of the trouble heretofore existing. Considerable trouble has also been experienced due to rats cutting the lead sheath of the subterranean cables, but this has been practically stopped by the use of poisonous fumes.

ENLISTED MEN.

The enlisted force, which aggregated 1,209 on June 30, 1913, has experienced the following changes: Enlisted and reenlisted, 393, of whom 284 were recruits; deserted, 70, being 5.79 per cent of the total force; died, 8, 0.66 per cent; discharged for disability, 7, 0.579 per cent; discharged by purchase, 76, 6.29 per cent.

Pursuant to instructions from the Secretary of War 35 enlisted men, operators in telegraph offices throughout the United States, have been withdrawn and many of these offices discontinued. In a number of the larger offices, where enlisted men were thus relieved, civilian operators have been employed in their places. This was done to provide additional men for the field organizations. It was found necessary in order to get a sufficient number of men for this purpose to withdraw 20 per cent of the enlisted force from service with the Washington-Alaska military cable and telegraph system. This put additional difficulties in the transaction of the large amount of business on the system, but it was necessary in order to provide men for the field organizations.

POST TELEPHONE SYSTEMS.

New telephone systems were constructed at Fort Thomas, Ky., and Fort Sill, Okla. A new underground telephone system was installed at Governors Island. The telephone systems at Fort Wood, Fort Porter, and Fort Ontario were overhauled and repaired. The telephone system at Governors Island was constructed under contract by the American Bell Telephone Co., all equipment being of their manufacture.

The trouble which the Signal Corps has been experiencing for a number of years in securing a physical connection between the Signal Corps switchboards forming part of the several post telephone systems and the trunk lines of telephone companies controlled by the American Bell Telephone Co. in neighboring cities was brought to an issue by the action of the War Department in filing with the Interstate Commerce Commission a complaint against the refusal of the Chesapeake & Potomac Telephone Co., in Washington, D. C., to connect with the Signal Corps switchboard at Fort Myer, Va. After a number of hearings and consultations had been held, the Bell Co., controlling the Chesapeake & Potomac Telephone Co., receded from their position and agreed to make such a connection at any Army post at which it was desired. It is anticipated that this agreement will result in a great improvement in telephonic conditions at Army posts. This will render unnecessary the dual system which at present obtains in a great many places, and will give all telephones at a post the benefit of direct long-distance connection when desired.

General Orders, No. 5, War Department, 1913, has further increased the number of authorized telephones on standard post telephone systems, though providing that such extensions shall be made only as funds become available. It has further provided that telephones not specified in that order may be installed upon the approval of the chief signal officer after statement of the specific need in each case has been furnished.

TARGET RANGE INSTALLATIONS.

The annunciator buzzer systems on the target ranges at Fort Niagara, Fort Snelling, Fort Sheridan, and Fort Leavenworth were repaired and standardized during the year, and a modern system constructed at Fort Sam Houston.

II. SIGNAL OFFICE, WAR DEPARTMENT.

DISBURSING DIVISION.

The following statement shows the volume of work handled during the fiscal year:

Orders placed	1,718
Vouchers audited and paid	2,909
Transportation requests prepared	516
Advertisements for proposals issued (about 7,500 copies being distributed)	1,258
Accounts current from officers handling Signal Corps funds, covering 10 appropriations examined	270

Letters, memoranda, post-card notices, and a large number of other miscellaneous papers pertaining to the above items are not included in the statement, it being impracticable to keep an accurate record of the number.

The following shows the disbursement from Signal Corps appropriations during the fiscal year:

Title.	Amount.	Disbursements.	Balance unexpended.
Signal Service of the Army, 1913	$375,000.00	$375,000.00	....
Maintenance, etc., fire-control installations at seacoast defenses	180,000.00	171,151.06	$8,848.94
Maintenance, etc., fire-control installations at seacoast defenses, insular possessions	22,277.32	20,219.25	2,058.07
Washington-Alaska military cable and telegraph system, 1912–13	40,971.04	40,971.04	....
Washington-Alaska military cable and telegraph system, 1913–14	50,000.00	22,399.93	27,600.07
Radiotelephone apparatus, 1913	458.33	458.33	....
Annunciator buzzer systems at target ranges, 1913	10,000.00	9,883.38	116.62

Disbursements have also been made from allotments to the Signal Corps, as follows: For fire-control installations, $22,267.27 out of $136,696.16; for encampment and maneuvers of the Organized Militia, $489.16 out of $489.16; for fortifications in insular possessions, $626.62 out of $1,398.53.

ENGINEERING DIVISION.

The work of this division comprises the handling of all requisitions for supplies for posts, organizations, and depots; the supervision of construction of the Signal Corps features of fire-control installations, post telephone systems, target-range equipments, and radio installations; the development and designing of telephones and other articles of special equipment connected with Signal Corps work; the revision and publication of Signal Corps manuals; the preparation and distribution of technical specifications and blue prints.

These matters have been satisfactorily handled during the year. The technical civilian force has handled the inspection of material pushed in a very efficient manner. One hundred and [illegible] drawings have been prepared and [illegible] drawings have been [illegible] by the drafting section. Approximately 18,000 copies of blue [illegible] [illegible] were [illegible] in connection with [illegible] [illegible] force in the [illegible] [illegible] Signal Corps property [illegible] [illegible] of the Signal Corps La[illegible] [illegible] The [illegible] [illegible] The greatest [illegible] [illegible] of the [illegible] of the [illegible]

[illegible]

clerks in this office at a higher rate of compensation than in the larger bureaus, where there is a proportionately larger amount of work of a routine character, instead of at a lower rate as at present. The average is nearly $125 per annum less per clerk than in other bureaus of the War Department.

In fairness to this office and in consideration of the volume and character of the work performed, it is believed to be a matter of plain justice to the clerks, many of whom have worked long and faithfully under these unfavorable conditions, that an increase in the clerical salaries should be authorized. Accordingly I have submitted estimates for the following increases in salaries for the fiscal year beginning July 1, 1915:

Proposed clerical force as covered by appropriation estimates for fiscal year 1915:			Present clerical force:		
1	chief clerk	$2,250	1	chief clerk	$2,000
3	clerks, $1,800	5,400	2	clerks, $1,800	3,600
1	clerk, $1,600	1,600	1	clerk, $1,600	1,600
4	clerks, $1,400	5,600	2	clerks, $1,400	2,800
12	clerks, $1,200	14,400	6	clerks, $1,200	7,200
8	clerks, $1,000	8,000	16	clerks, $1,000	16,000
3	messengers, $840	2,520	3	messengers, $840	2,520
2	assistant messengers, $720	1,440	2	assistant messengers $720	1,440
34		41,210	33		37,160

The increase of one clerk is asked in order that the additional work due to the pending activity in aeronautics may be properly performed.

SIGNAL CORPS LABORATORY.

During the past year experimental work was continued in the Signal Corps laboratory. A fair amount of work was done in this line, considering the length of time required, and successful experimental apparatus developed into actual field equipment.

A new camp telephone switchboard, lighter, more compact, and believed to be superior to anything yet produced, was developed and models made for the guidance of the manufacturer. The camp telephone used with this switchboard was also developed and models constructed. This telephone serves the purpose of either a desk or wall set for camp purposes, and can also be used as a portable set for field purposes or upon target ranges; it is light, compact, and easily handled.

The Signal Corps is keeping pace with radio progress, and several new improvements have been incorporated in the pack sets constructed during the last year; these improvements will practically double the output of the sets, with no additional weight. A new type of inclosed gear has been adopted to replace the old open type and the generators equipped with the speed indicator, thus obviating the old over and under speed clutch. The circuits of these sets also have been modified.

A new radio set for aeroplane work was developed during the year, and practically all the equipment, with the exception of the generator, constructed in the laboratory.

purchased in a very efficient manner. One hundred and one new drawings have been prepared and 85 drawings have been revised by the drafting section. Approximately 13,000 copies of blue prints and lithographs were issued by this division in connection with purchases and for the information of the technical force in the field. During the fiscal year 3,922 copies of Signal Corps property returns were examined. The experimental work of the Signal Corps Laboratory has been continued with great profit. The radio pack sets have been still further improved and lightened. The greatest improvement was the placing of the key in the field circuit of the generator, which resulted in doubling the effective range of the set.

CLERICAL FORCE.

To maintain an efficient clerical force it is essential that the lower salaries shall be sufficient to attract competent clerks to the service, that the salaries paid shall be so graded as to insure promotions sufficiently frequent to stimulate to the best effort, and that the positions requiring expert services shall be sufficiently highly paid to retain and develop those best fitted for the work.

The clerical classification of the Signal Office falls short of these conditions, and even short of the more favorable clerical classification of other bureaus of the classified service in Washington. The following table shows under what a decided disadvantage this bureau operates in comparison with other branches of the Government service:

Comparative table of salaries, based upon legislative, executive, and judicial act.

Basis of comparison.	Executive departments.	War Department.	Signal Office as at present.	Signal Office if estimates submitted are approved.
Average clerical salary	$1,324.44	$1,310.43	$1,185.71	$1,284.49
Per cent of salaries less than $1,200 per annum	25	21	57	27
Per cent of salaries more than $1,200 per annum	45	42	21	31
Per cent of salaries ranging from $1,200 to $1,400 per annum	30	36	21	42
Per cent of salaries ranging from $1,400 to $1,600 per annum	19	18	7	14
Per cent of salaries ranging from $1,600 to $1,800 per annum	13	11	4	4
Per cent of salaries ranging from $1,800 to $2,000 per annum	10	10	7	10
$2,000 per annum and more ... per cent	4	3	4	4

The preceding table is based alone upon the salaries paid for services ordinarily performed by clerks of all Government bureaus. The salaries of chief clerks of departments, for administrative services, and technical services performed by law clerks, patent examiners, etc., and for messenger service have not been considered.

Under these conditions it is not surprising that more than 25 per cent of the clerks of this office have resigned or transferred to other branches of the Government during this fiscal year.

The work of the Signal Office is largely of a technical nature, necessitating special training to insure its prompt and successful prosecution. This circumstance, it is believed, warrants the payment of clerks in this office at a higher rate of compensation than in the larger bureaus, where there is a proportionately larger amount of work of a routine character, instead of at a lower rate as at present. The average is nearly $125 per annum less per clerk than in other bureaus of the War Department.

In fairness to this office and in consideration of the volume and character of the work performed, it is believed to be a matter of plain justice to the clerks, many of whom have worked long and faithfully under these unfavorable conditions, that an increase in the clerical salaries should be authorized. Accordingly I have submitted estimates for the following increases in salaries for the fiscal year beginning July 1, 1915:

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3 clerks, $1,800	5,400
1 clerk, $1,600	1,600
4 clerks, $1,400	5,600
12 clerks, $1,200	14,400
8 clerks, $1,000	8,000
3 messengers, $840	2,520
2 assistant messengers, $720	1,440
34	41,210

Present clerical force:	
1 chief clerk	$2,000
2 clerks, $1,800	3,600
1 clerk, $1,600	1,600
2 clerks, $1,400	2,800
6 clerks, $1,200	7,200
16 clerks, $1,000	16,000
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2 assistant messengers $720	1,440
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A new radio set for aeroplane work was developed during the year, and practically all the equipment, with the exception of the generator, constructed in the laboratory.

New metal case, Artillery type, common battery telephones have been developed to replace the old wooden type composite instruments. Models of the wall set, B. C. gun set, and plotter set are under construction and will be forwarded to the Coast Artillery board, Fort Monroe, Va., for test and recommendation.

A new water-tight outlet box for target ranges was developed, model constructed, and is now under test at Fort Leavenworth target range.

Model of the new hook for wire pike was also made and sent to a field company for test.

Two open-circuit duplex telegraph sets for use in connection with the submarine cable installed at Manila, and embodying several unique features, were assembled in the laboratory and shipped to the Philippines.

The laboratory also makes repairs as far as possible to its own instruments and to such other instruments as are sent in from time to time requiring services of an expert.

PHOTOGRAPHY AND PUBLICATIONS.

PHOTOGRAPH ROOM.

For some years this office has maintained in connection with its technical work a photograph room especially adapted to making of negatives of any apparatus devised in connection with the laboratory here and to furnish prints for official use for field organizations, Alaska, and the Philippines. For several years past it has been possible with an improvised apparatus to take photographs of records directly on paper, which has been of immense value to the office.

In the past year a new and larger device for securing quick duplicate copies of documents has been installed, and the photograph room has been removed to the fifth floor of the War Department. The new apparatus and more convenient location has enabled this office not only to do its own photographic work but to assist other bureaus in the War Department in the quick preparation of photographic data. At a very small expense it has been possible to secure results in this way which would be impossible otherwise.

MOVING PICTURES OF CAVALRY CAMP.

In collecting pictorial information for distribution to the Army, and perhaps for the recruiting service, no modern device is more efficient than the moving-picture machine. By means of this the Signal Corps has been able to secure photographic records of the work done in the Cavalry brigade camp near Winchester, Va., which it is hoped will prove of interest to the Army wherever copies of these films are sent. It is possible to present for the inspection at any post possessing a kinematograph projector, of which there are now many, animated pictures of all the new formations and evolutions of this command. Such data can not fail to be of great interest now as well as in the future, and it is thought that measures should be taken to have this made a part of the record which the War Department should secure of every important military event.

FIELD PHOTOGRAPH APPARATUS.

The Board of Ordnance and Fortification several months ago allotted $500 to the Signal Corps for conducting experiments in apparatus for field use for securing telephotographs and for enlarging and projecting the same, to furnish prompt information in the field secured by photographic apparatus in the hands of scouting parties. This apparatus is now being devised, and there is every hope that within another year this office may be able to turn over to the Army field apparatus of this kind which may be of great value.

PUBLICATIONS.

A revised edition of Signal Corps Manual No. 7 was issued. The work of revising Signal Corps Manuals Nos. 3 and 8 to bring them thoroughly in line with the present conditions is well under way. The revision of Manual No. 3 will be accomplished by the issue of "Changes," while it will be necessary to entirely reprint Manual No. 8.

WAR DEPARTMENT TELEGRAPH CODE.

In accordance with instructions from the Secretary of War, the Chief Signal Officer has undertaken the preparation of a revised War Department code book. The old code book has the disadvantage of having too many letters in each code word, which increases the expense on cable and land telegraph lines; and there are great numbers of new phrases needed, in addition to the abandonment of a large number of obsolete terms. In many other ways it is hoped that the new code book will be an improvement on the old, and it is contemplated to establish a far more extensive use of the code book than heretofore. It is recognized that for military use, especially in radiotelegraphy, much confidential telegraphic correspondence will necessarily be put into cipher, and the readiest and safest means of doing this is by the use of a well-constructed code book to which an appropriate key may be applied.

The office has secured the services of an expert in code work, and with his undivided attention to this work it is thought prompt results will be realized.

INTERDEPARTMENTAL CODE.

A representative of this office has acted in conjunction with representatives from the State and Navy Departments in making plans for a code which would be suitable for use, especially in distant lands, between officers of the Army and Navy and representatives of the Department of State. A special code for the use of the departments should be undertaken at once and money for work, say $10,000, appropriated.

SIGNAL BOOK.

In accordance with letter of instructions from the Secretary of War of January 2, 1912, the present Chief Signal Officer of the Army, as a member of a board acting in conjunction with the Navy Department, prepared a new signal book for the Army to take the place of Manual No. 6, which has heretofore been the manual dealing with visual signaling in the Army. The new signal book thus prepared was issued as Circular No. 7 from the office of the Chief Signal Officer and was approved by the Secretary of War for the use of the Army.

For the first time effective signaling between the Army and Navy may be carried on, and this will greatly facilitate intercommunication between these two services. The establishment of stations in all the Coast Artillery districts and instructions to exchange messages with all arriving naval vessels has tended greatly to extend and improve visual signaling in the Army.

This signal book adopts the International Morse Code, abolishes the Myer Code, and gives specific instructions concerning the various methods of visual signaling, including the use of the Ardois system, the stationary and two-arm semaphore, the international code of signals, and emergency signals. It also gives complete instructions for locating and operating signal stations and the management of the field visual signaling kits now used by the Signal Corps.

RADIO MANUAL.

Another Signal Corps publication which has been greatly needed is now completed in manuscript form and will shortly be issued. This publication deals with the installation and operation of radiotelegraph apparatus, especially in field stations. The Signal Corps now uses and has issued a large number of radiotelegraphic sets suited for pack transportation and a number of wagon sets. Many changes necessitated by the rapid advance of this art have made it inadvisable up to the present to issue anything more than mere bulletins of progress. The present sets are so satisfactory, however, that it is probable they will be in use for some time to come, and it has been necessary to issue for the use of the Regular Army and the National Guard instructions in the management of this new apparatus.

ESTABLISHMENT OF ENGINE-TESTING PLANT AT BUREAU OF STANDARDS.

The urgent necessity of authoritative tests on engines needed in the Signal Corps aeronautical equipment has been such that the establishment of an adequate testing plant for that purpose was undertaken about a year ago. This is now completed, through the cooperation of the Bureau of Standards in furnishing a site and a proper building thereon and the Sprague Electric Co. 125-horsepower dynamometer, with switchboard and all the necessary mechanical appliances, and constitutes what is admittedly the most complete plant of its kind in this country. By means of this plant all questions as to the power of engines before their installation in the aeroplanes, which has heretofore been largely a matter of speculation, may now be settled.

III. SIGNAL TROOPS OF THE ORGANIZED MILITIA.

Complete field company equipments have been issued to the States of Connecticut and Michigan and the District of Columbia during the year.

A field equipment of semaphore flag kits and wrist watches is now ordered, and will shortly be available for issue to the Field Artillery organizations of the Organized Militia. The cost of these articles has been reimbursed to the Signal Corps from the allotment received from the Chief of Ordnance to cover the gratuitous issue of Field Artillery equipment to the militia.

Field Service Regulations of 1913 prescribe for each division one battalion of Signal Corps troops composed of two field companies. There are at present in the United States 12 militia divisions. In order, then, that the Militia Signal Corps organizations be in the correct proportion, there should be 24 companies, or 2 to each division. These companies should also be the same as field companies of the Regular Army.

Circular No. 1, issued by the Division of Militia Affairs, dated January 21, 1913, prescribes four types of field companies for the Organized Militia:

Type A, containing 4 wire sections and 2 radio sections.

Type B, containing 4 wire sections.

Type C, containing 2 wire sections.

Type D, containing 2 wire sections and 2 radio sections.

Type A is the same as a Regular Army field company. There are at present in the United States:

Type A companies	11
Type B companies	3
Type C companies	3
Type D companies	5
Total companies, Signal Corps, Organized Militia	22

It will be seen that just one-half of the companies are of the Regular Army type and that 2 companies are lacking to make the number necessary to conform to the required proportion for the 12 divisions.

This Regular Army type company is maintained at war strength, which gives the Signal Corps an advantage over the other branches of the service when called into active service, as the several organizations will not have to suffer from the influx of recruits.

As will be seen from the table, by combining a type C and a type D company a type A company results. In some cases, when called into active service, it will be advisable to combine certain of these organizations, thus forming at once a war strength company requiring no recruits and one that is at least partially trained.

Many of the existing signal organizations are composed of a very good personnel, men who in their civil pursuits follow lines involving telegraphy, electricity, machinery, etc., so that they are well suited to perform their similar duties in Signal Corps work.

Many of these companies are well supplied with Signal Corps equipment and all will shortly be fully so supplied. The 1913 model radio pack sets are now being issued to the type A and type D companies. All new equipment is paid for from unallotted funds, and is not a charge against the several States' allotments.

Some few of the armories of these organizations are not suitable for proper indoor instruction, and many of them have no provision for mounted instruction, so important for field companies. However, improvement is being made along these lines. Most of the organizations take proper care of the technical equipment furnished them, and all take a keen interest in its use.

A correspondence course of instructions has been adopted by the Chief of the Division of Militia Affairs for the instruction of officers belonging to signal organizations of the Organized Militia. It is thought that this course will aid the efficiency of the organizations. It is considered an important advance in militia instruction and will receive all practicable assistance from the Signal Corps of the Army.[1]

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[1] The information on which the above report is based was furnished this office by the Division of Militia Affairs.

IV. RADIOTELEGRAPHY.

Radio stations installed by the Signal Corps.

Name of station.	Call letter.	Power (kilowatts).	Whether open to public service.
UNITED STATES.			
Fort Andrews, Mass	WUA	1	Not open to public service.
Fort Hancock, N. J	WUB	1	Do.
Fort H. G. Wright, N. Y	WUC	1	Do.
Fort Leavenworth, Kans	WUD	3	Do.
Fort Levett, Me	WUE	1	Do.
Fort Monroe, Va	WUF	1	Do.
Fort Monroe, Va. (Coast Artillery School)	WUG	2	Do.
Fort Omaha, Nebr	WUH	3	Do.
Fort Riley, Kans	WUI	3	Do.
Fort Sam Houston, Tex	WUJ	10	Do.
Fort Stevens, Oreg	WUK	1	Do.
Fort Totten, N. Y	WUL	1	Do.
Fort Wood, N. Y	WUM	1	Do.
Fort Worden, Wash	WUN	1	Do.
San Francisco, Cal. (Fort Winfield Scott)	WUO	2	Do.
Signal Corps laboratory, Washington, D. C	WUP	1	Experimental.
Bureau of Standards, Washington, D. C	WUQ	2	Do.
Fort Leavenworth, Kans. (Army Signal School)	WUV	1	Do.
ALASKA.			
Circle City	WVA	3	Open to public service.
Fairbanks	WVB	5	Do.
Fort Egbert	WVC	5	Do.
Fort Gibbon	WVD	10	Do.
Fort St. Michael	WVE	3	Do.
Kotlik	WVF	1	Do.
Nome	WVG	10	Do.
Nulato	WVH	10	Do.
Petersburg	WVI	1	Do.
Wrangell	WVJ	1	Do.
PHILIPPINE ISLANDS.			
Fort Frank (Carabao Island)	WVL	½	Not open to public service.
Fort Hughes (Caballo Island)	WVM	½	Do.
Fort Mills (Corregidor Island)	WVN	10	Do.
Fort Drum (El Fraile Island)	WVP	½	Do.
Fort William McKinley, Rizal	WVQ	¼	Do.
Fort Wint (Grande Island)	WVR	1	Do.
Manila	WVU	1	Do.
HAWAII.			
Fort De Russy (Honolulu)	WZG	2	Not open to public service.
UNITED STATES ARMY TRANSPORT SERVICE.			
Buford	WXA	2	Open to public service.
Crook	WXB	2	Do.
Dix	WXC	2	Do.
Kilpatrick	WXD	2	Do.
Liscum	WXE	2	Do.
Logan	WXF	3	Do.
Meade	WXG	2	Do.
McClellan	WXH	2	Do.
Merritt	WXI	2	Do.
Sheridan	WXJ	3	Do.
Sherman	WXK	3	Do.
Sumner	WXL	3	Do.
Thomas	WXM	3	Do.
Warren	WXN	2	Do.

Radio stations installed by the Signal Corps—Continued.

Name of station.	Call letter.	Power (kilowatts).	Whether open to public service.
SIGNAL CORPS CABLE SHIPS.			
Burnside	WXR	3	Not open to public service.
Cyrus W. Field	WXS	1	Do.
Joseph Henry	WXT	2	Do.
ARTILLERY HARBOR TUGS.			
General Robert Anderson	WYH	½	Not open to public service.
Captain Charles W. Rowell	WYI	½	Do.
General A. M. Randol	WYJ	½	Do.
General Harvey Brown	WYK	½	Do.
General R. B. Ayres	WYL	½	Do.
James Fornance	WYM	½	Do.
Reno	WYN	½	Do.
Major Evan Thomas	WYO	½	Do.
Captain Gregory Barrett	WYP	½	Do.

RADIO AT COAST DEFENSES OF THE UNITED STATES.

New high-frequency, quench-spark, 1-kilowatt radio sets were installed at Fort Andrews, coast defenses of Boston; Fort Levett, coast defenses of Portland; Fort H. G. Wright, coast defenses of Long Island Sound; Fort Stevens, coast defenses of the Columbia; and Fort Worden, coast defenses of Puget Sound.

The latest type high-frequency, quench-spark, Signal Corps pack set was also furnished for the Artillery tugboats in the coast defenses of Portland, Boston, Long Island Sound, southern New York, San Francisco, Columbia, and Puget Sound.

All of the above equipment embodies the latest features of the radio art and is believed to be the best obtainable for the desired purpose.

RADIO, PHILIPPINE DEPARTMENT.

The 1-kilowatt radio set intended for Fort Wint was installed at Fort Mills in connection with the 10-kilowatt set already in operation at that place, by direction of the department commander, for important military reasons and in order that it may be used for short-range work.

The Fort Mills station on Corregidor Island has continued to give good service. During the course of a practice march of several days' duration communication was maintained with this station by means of the hand-driven radio pack sets up to distances of 75 miles or more.

RADIO, ARMY TRANSPORT SERVICE.

New 2-kilowatt, high-frequency, quench-spark sets were installed on United States Army transports *Meade* and *McClellan* to replace the 1-kilowatt sets temporarily installed on these transports during the previous year. New radio houses were built on these boats and the installations made permanent. The radio sets on the *Kilpatrick* and *Sumner* were overhauled at the time it was necessary to put these ships in commission. A new 2-kilowatt, high-frequency, quench-spark set was purchased and installed on the transport *Liscum*.

In order to comply with the radiotelegraph laws, storage-battery equipment, complete, with switchboard charging panel, was furnished and installed on all United States Army transports. With this equipment these sets can be operated continuously at full-rated power over a period of six hours independent of the ship's power.

GENERAL.

The high-frequency, quench-spark type radio pack set designed by the Signal Corps during the previous year was greatly improved during this year, the chief improvement being the adoption of the inclosed gear for the hand-driven generator and a modification of the primary circuit, whereby the sending key is inserted in the field circuit of the alternating-circuit generator. By the adoption of the above an intermittent output of practically double that obtained from the old type can be obtained, thereby practically doubling the output and materially increasing the range of the set. A speed indicator has also been added to the generator, by means of which the men operating same can observe when the generator is being driven at the proper speed, thus obviating the necessity of over and under speed clutch used in connection with the hand generators previously furnished. A number of the new type of these radio sets are now under construction and will be available for issue during the first part of the coming fiscal year. A small, compact gasoline engine has been issued in several instances in connection with the generators furnished for these pack sets, and experiments are now being made to ascertain the advisability of adopting this type of equipment in conjunction with the hand generators for fieldwork.

As far as possible only radiotelegraph equipment manufactured in this country has been purchased, although it has been necessary to supply some spare parts of foreign manufacture for apparatus previously purchased.

RADIO SETS FOR AEROPLANES.

One of the most interesting developments in radiotelegraphy apparatus has been the devising and construction of a radiotelegraph set for aeroplane use, which has been done at the Signal Corps laboratory. The principal features of this set are its extreme lightness, compactness, and efficiency, and the provision of a novel generating set in connection therewith. Successful experiments have been made with improvised apparatus up to a distance of 13 miles, but with the new apparatus, having several times the usual power, it is thought that ranges of at least 30 miles may be obtained from the aeroplane. So far no successful method of receiving messages in the aeroplane itself has been devised. Fortunately, however, but little use for reception of signals is needed, the prime requisite being to send messages *from* the aeroplane.

BUREAU OF STANDARDS.

The equipment at this station has been used for the development of the more highly technical parts of the radio equipment, the calibration of wave meters, and the general work of the measurement of the high-frequency constants of radiotelegraphy.

The 100,000-cycle alternator and the arc sets for the development of sustained oscillations have given satisfactory service. The use of such oscillations is now better appreciated, and on several occasions this equipment has been used by representatives of the leading technical schools and institutions of the country for the purpose of research in high-frequency work.

V. MILITARY AERONAUTICS.

From June, 1912, until November the Signal Corps continued its practice and experimental work at College Park, Md., where an aviation school had been previously established, and where were concentrated all the aeroplanes and aviation material in the possession of the Army, with the exception of two hangars and one aeroplane at San Antonio, Tex., and one hangar at Fort Leavenworth, Kans. On November 1 there were 8 hangars at College Park, 12 aeroplanes, a detachment of 12 officers on aviation duty, and 39 enlisted men. The machines included both the Curtiss and Wright types. The instruction given on these types included both the preliminary work necessary for beginners to obtain the F. A. I. (preliminary license) and also the necessary training of the higher order to obtain the rating of "Military Aviator."

During the period from July 1 to October 1 the main work done was that of instruction. In addition to this, however, time was found to experiment with an automatic gun, photography, and radio, and to take part in the maneuvers near Bridgeport, Conn. The experiments in photography, with the gun, and in radio were successful, the radio outfit developed later being used at Fort Riley, Kans., in connection with the observation of Field Artillery fire from aeroplanes.

OBSERVATION AND CONTROL OF FIELD ARTILLERY FIRE.

Aeroplanes were used for the first time in the United States in connection with the observation of Field Artillery fire from November 5 to November 13, 1912. The aeroplanes were used to locate targets, give the range and direction from the battery, and locate the hits with reference to the targets, giving the necessary corrections.

There were three methods used to transmit information from the aeroplane to the firing battery. The first and most successful was radiotelegraphy. By this means it was not found necessary for the aeroplanes to remain in special position with reference to the battery, as the aeroplanes can observe the effects of fire from front, rear, or either flank, and communicate with the battery without difficulty. Second, dropping cards. It is found necessary in this method for the aeroplane to remain over the battery when the cards are dropped. If the cards are dropped when the aeroplanes are some distance from the battery there is considerable delay in obtaining the information. Third, the smoke-signal method. This was not found as successful as the other two on account of the churning of the air by the propellers of the machine and the lampblack accordingly dissipated. However, this method may be used for short distances very satisfactorily.

The tests proved conclusively that the use of observers in aeroplanes in connection with Artillery fire at hidden targets is entirely practicable and furnishes means of reaching targets which could not be found otherwise.

When the aeroplane ascended to an altitude of about 2,000 feet it was possible to see the reverse side of slopes of hills and locate targets thereon that could be found in no other way, and when the battery opened fire the position of hits could be located much more accurately and the range corrected by this kind of observation with more certainty than by any other means of fire control tried so far.

GUN FIRE EXPERIMENTS.

In the firing experiments conducted at College Park the Lewis gun was found to be well adapted for service on aeroplanes, as it is sufficiently light in weight for a man to fire from his shoulder. The gun was fired both from the ground and from an aeroplane. In the latter case it was mounted temporarily on a practice machine of the Wright type, and was fired from an altitude varying from 200 to 600 feet. There were 14 hits made out of 50 shots fired. The speed of the aeroplane was 45 miles an hour. The target used was a strip of white cloth 60 feet in length by 5 feet wide. The results of this firing were gratifying, as it was found that the aim could be obtained both by driving the machine directly over the target and holding the gun in place, or by pivoting the gun itself and using both methods together.

MACHINES.

Delivery was made by the Wright and Curtiss companies of scout aeroplanes of the latest type up to that time, and the first tests of machines under these new specifications were held during months mentioned. The machines were far superior to any formerly owned by the Government. Two machines of the Wright type accepted under these specifications were those used with the Field Artillery at Fort Riley, Kans., during October and November.

MANEUVERS.

Two machines, one of the Wright type and one of the Curtiss type, were sent with four officers to take part in the maneuvers held in the vicinity of Bridgeport, Conn., during the month of August. As these machines were of the old type, it was impossible to carry observers, except under the most favorable conditions. As the conditions during the maneuvers were far from ideal, it was necessary for the operator to make his own observations in addition to piloting the machine. Under these disadvantages, however, the results were good; the information obtained was accurate and covered the whole field of operations. Complete reports by all officers concerned in the work of the aeroplanes in the maneuvers were submitted to the Chief Signal Officer, and are on file in this office.

MACKAY TROPHY.

From the College Park station was made the flight for the Mackay trophy. This trophy was presented by Mr. Clarence H. Mackay to the War Department for annual competition by military aviators.

The trophy was offered at the annual banquet of the Aero Club of America, January, 1912, and was accepted for the War Department by Gen. James Allen, then Chief Signal Officer, United States Army. A set of rules for determining the winner was drawn up and approved by the War Department and the board of governors of the Aero Club of America. These tests necessitated that the aviator demonstrate his ability to handle his aeroplane and make a reconnoissance flight as follows:

(*a*) Cross-country flight, 20 miles.
(*b*) Altitude not less than 1,500 feet during flight.
(*c*) Reconnoissances of triangle 10 miles on side, to locate troops, report their whereabouts, and composition.
(*d*) Make accurate landing upon return.
(*e*) Make detailed report of location of troops, composition, and strength.

A board to determine the winner was appointed, and each test was given a value. The maximum number of points that could be attained was 300. The tests were held at College Park the 9th of October, 1912, with but two competitors entered. Both aviators left the field about 9.30 a. m. One was forced to return on account of sickness, without having made the necessary reconnoissance; the other returned in about three-quarters of an hour, having located the troops, and was declared the winner of the trophy. The trophy was formally presented by the president of the Aero Club of America to the Assistant Secretary of War.

In November, for reasons of climate, the training school at College Park was discontinued for the winter, and during the winter months the aviation school was conducted at Augusta, Ga. There were five officers present for duty and seven aeroplanes for instruction purposes, including a Burgess-Wright tractor.

At San Diego, Cal., there had been established a temporary school of instruction for the use of which the Government paid nominal rental, and instruction was carried on with hydroaeroplanes and flying boats.

In February, 1913, the second division of the mobile army was concentrated at Texas City, Tex., and it became obvious to the then Acting Chief Signal Officer that the aviation school should be immediately transferred from Augusta to Texas City in order to take part in field operations and because it is believed to be a cardinal principle, heretofore not fully realized, that aviation should be carried on in the presence of troops in order that the Army, and especially commanding officers, may learn something of the use of the aeroplane under actual field conditions and that the aviators themselves do their work in connection with the men of the line of the Army, for whose advantage they are being trained.

Accordingly the entire school at Augusta and the small aviation detachment temporarily at Palm Beach, Fla., were removed to Texas City, placed in camp near the headquarters of the second division, and when conditions permitted were used to maneuver from the concentration camp.

Weather conditions on the Gulf coast in the spring of the year are very unfavorable to aviation, and particularly so for beginners in this science, but nevertheless some progress was made by the latter, and the more experienced aviators performed some very praiseworthy and remarkable flights, which it is believed helped the cause of aviation with the Army.

The following flights are briefly noted: A cross-country flight from Texas City, Tex., to San Antonio, Tex., during which was established a new American cross-country and endurance record for pilot and observer together, on the 28th of March, and the return trip to Texas City made under similar conditions on March 31. The flight to San Antonio began at 2.15 p. m. and ended at 5.35 p. m., making the time 3 hours and 20 minutes in covering the 240 miles between the start and finish; but on arriving at San Antonio the aeroplane remained in the air for over an hour, thus establishing a new American endurance record for pilot and observer of 4 hours and 22 minutes. The return trip from San Antonio to Texas City was more rough than the outgoing one, but was successfully made. Thus two of the longest nonstop cross-country flights ever made in this country, not only by military aviators but by any aviator in America, were completed. The actual distance covered was some 480 miles, with one stop; the actual length of flight was about 540 miles.

This flight is even more remarkable than it first appears, on account of being made entirely over unfamiliar country that offered but few landing places in case of engine accident. The machine used was the Burgess tractor, equipped with a 70-horsepower Renault motor. On the return to Texas City a gust of wind tore away the right triangular vertical accessory plane, but the flight was uninterrupted.

On this same trip a remarkable military sketch map was made by the reconnoissance officer, which was fairly complete in detail and showed railroads, wagon roads, towns, streams, hills, woods, prairies, and other topographical features that might be of great value in military reconnoissance work. The map was made in sections, unrolled as each was completed, the sections showing the country traveled during intervals of 10 minutes. The scale was in minutes and the entire map was about 18 feet in length. This is the first map ever made from an aeroplane covering such a distance—so far as known.

Earlier in the month a flight was made from the camp at Texas City to Houston, Tex., and return, a total distance of 80 miles, and following this flight another was made from Texas City to Houston and return.

Meantime training was continued at San Diego, Cal., with both hydroaeroplanes and flying boats, and, in spite of two fatal casualties, very considerable progress was made. The officer in charge of the camp at that place made numerous cross-country flights and instructed beginners. Two officers completed all tests for the military aviator's certificates, as did another just before his death on May 8.

An excellent and very unusual map was made by one of the aviators while flying alone, and is remarkable as an evidence of what an aeroplane can do in reconnoissance work even without an additional observer.

Several other brilliant flights were made in the vicinity of San Diego. One of these covered 55 miles in 1 hour and 5 minutes at an altitude of 6,500 feet.

About this time preparations were made to abandon the aviation school at College Park, Md., and on May 6 the Chief Signal Officer recommended that the annulment of the lease, which expired on June 30, 1913, be authorized and the abandonment of College Park as a station be accomplished.

Experience proving that, for comparatively unskilled men, training at Texas City was too hazardous to be continued, the less experienced fliers and their instructors at Texas City were transferred to San Diego, Cal., about June 14, 1913, at which place weather conditions are known to be as nearly perfect as may be found in this country.

At the present time the status of the personnel engaged in aviation duty is as follows:

With the second division, Texas City, Tex., 1 officer, 26 enlisted men of the Signal Corps, and 2 aeroplanes.

At San Diego the school has under instruction, for the purpose of obtaining the certificate of military aviator, 12 officers. There are at this school about 48 enlisted men and 7 aeroplanes. Under orders from the War Department 1 officer with 2 aeroplanes and 12 enlisted men were sent to Honolulu for duty with the First Hawaiian Brigade.

In the Philippine Islands the officer in charge has on temporary duty for instruction purposes four officers. With this detachment are five enlisted men and two machines.

At the present time there are 11 officers who have been rated as military aviators; four of these have been returned to their arm of the service and one is deceased.

It may be remarked that the present and logical plan in regard to future aviation in the Army is to concentrate the aviators, personnel, and matériel now in the United States at some suitable Government reservation where ample ground is available and where all aviators who have reached a sufficient degree of proficiency may be trained in the presence of troops to carry on the future work of aviation. It will probably be found necessary, at least for the present, to maintain a school of preliminary instruction at some place such as San Diego where the officers beginning the work can receive their preliminary training, after which they will be concentrated at a main aeronautical center.

MATÉRIEL FOR AERIAL NAVIGATION.

In addition to the vast amount of data that has already been compiled on this subject in the office of the Chief Signal Officer of the Army, the following aviation matériel exists in the Army to-day:

Number.	Make.	Type.	Motor.	Horsepower.	Station.	Military type.
2	Curtiss	D	Curtiss	75	San Diego, Cal	Speed scout.
3	Wright	B	Wright	30	do	Training.
5	B-Wright.	F	Sturtevant	40	do	Do.
6	Curtiss	D–E	Curtiss	60	do	Do.
8	do	E	do	75	Honolulu, Hawaii	Scout.
9	Burgess tractor.	H	Renault	70	Texas City, Tex	Do.
10	Wright	C	Wright	50	San Diego, Cal	Do.
12	do	C	do	50	Manila, P. I	Do.
14	do	C	do	50	Texas City, Tex	Do.
16	do	C	do	30	San Diego, Cal	Training.
17	B-Wright.	I	Sturtevant	60	Manila, P. I	Scout.
19	Wright	D	Wright	50	San Diego, Cal	Speed scout.
20	do	D	do	50	San Antonio, Tex	Do.
21	Curtiss tractor.		Curtiss	80	Honolulu, Hawaii	Scout.
22	do		do	90	San Diego, Cal	Do.

Aeroplanes not in use.

Number.	Make.	Disposition.
1	Wright	Delivered to Smithsonian Institution.
4	do	Destroyed in accident.
7	do	Do.
11	do	Do.
13	do	Do.
15	Curtiss flying boat	Do.
18	Burgess-Wright	Do.

It will thus be seen that there are now actually on hand for service 17 aeroplanes, and 6 more will be delivered by October 15, 1913. The free-balloon and captive-balloon material now at Fort Omaha, which will be of use as part of a dirigible plant, will be necessary for all preliminary training in dirigible-balloon service. It is to be understood that a thorough knowledge of the management of free balloons and of gas plants is necessary to practical aeronauts who are to take charge of and fly dirigibles.

RADIOTELEGRAPHY AS APPLIED TO AVIATION.

In connection with the material now used in aviation, note must be taken of radiotelegraphy. The importance of this art as being the only suitable means of immediately reporting the results of a distant reconnoissance was early recognized by the Signal Corps. Experiments which were begun last summer at College Park, Md., have since been continued, and steady progress has been made. The same general type of apparatus has been used as in the standard Signal Corps radio-pack set, with certain exceptions necessary to secure the desired economy in weight. The first tests were made with the antenna, a wire from which the electromagnetic waves are radiated, installed on the frame of the machine, but this has since been abandoned in favor of a hanging wire on account of the increased range of operation. The distance which these sets will cover depends largely on the height of the mast carrying the receiving antenna, and in the case of the sectional mast of the Signal Corps field companies this should be about 25 miles. In the event of hostile armies approaching contact, this distance corresponds in time to between one and two days.

The aeronautical radio set developed by the Signal Corps represents the latest achievements in the art. The quenched spark, the 500-cycle generator, and other recent developments have been combined to produce in one machine the maximum of efficiency. It is believed that no foreign army to-day is prepared to duplicate this set.

EQUIPMENT AND PERSONNEL.

The equipment and personnel of the Army Aviation Service September 30, 1913, are:

IN THE PHILIPPINES.

Equipment:
- 2 medium-powered scout-type machines. (1 Burgess type hydroaeroplane and 1 Wright scout-type aeroplane.)
  - The above machines can be converted into hydroaeroplanes with equipment already in Philippines.

Personnel:
- 4 military aviators.
- 1 officer on temporary duty, capable of flying alone.

IN HAWAII.

Equipment:
- 1 medium-powered Curtiss tractor.
- 1 medium-powered Curtiss scout-type aeroplane, with necessary equipment to convert them into hydroaeroplanes.

Personnel, 1 military aviator.

SAN DIEGO, CAL.

Equipment:
- 3 low-powered Wright type training machines.
- 1 low-powered Curtiss type training machine.
- 1 medium-powered Curtiss tractor.
- 1 Curtiss speed scout.
- 1 scout type medium-powered Wright aeroplane.
- 1 speed scout Wright.

Personnel:
- 4 military aviators.
- 4 officers capable of flying alone.
- 8 officers receiving instruction.

SAN ANTONIO, TEX.

Equipment, 1 medium-powered speed scout aeroplane.
Personnel, none.

TEXAS CITY, TEX.

Equipment:
- 1 medium-powered Wright scout-type aeroplane.
- 1 high-powered Burgess scout-type aeroplane.

Personnel:
- 1 military aviator.

The Army has no dirigibles of any kind.

The following machines are ordered and should be accepted by the Government by October 30, 1913:

Three Burgess medium-powered scout-type aeroplanes, Renault engines, 70 horsepower.

One Wright high-powered aeroplane, new requirements, Austro-Daimler engine, 90 horsepower.

One Curtiss high-powered aeroplane, new requirements, Gnome engine, 160 horsepower.

One Burgess-Curtiss high-powered aeroplane, new requirements, Renault engine, 100 horsepower.

PENDING PURCHASES OF AEROPLANE ENGINES.

This office has made arrangements with the consul general at Paris, France, through the State Department, to purchase eight Renault aeroplane engines of 70 horsepower each. Two of these engines were delivered in August, four during September and two during October. The cost of the engines is 12,000 francs ($2,400) each in Paris. This is the same size and type of engine used in the tractor aeroplane that made such a successful trip from Texas City, Tex., to San Antonio, Tex., and return, in April.

Three more of these machines are being constructed by the Burgess Co. and Curtiss, of Marblehead, Mass. It is desired to have an entire squadron equipment of eight machines of this type, with four engines in reserve, as is the universal custom in the aeronautical services abroad. This type of machine can be used by experienced fliers, and is intermediate between the small practice machines and the large high-speed war type, three of which are now being constructed.

SUMMARY OF AEROPLANE SERVICE.

The following is a résumé of the important work done by the United States Army aero squadron in the past two years:

Radio.—During the Connecticut maneuvers, signals which were sent 12 miles were received and heard very distinctly.

At College Park in August, 1912, messages were sent for 10 miles that were heard without any trouble.

At Fort Riley the aeroplane was in constant communication with the ground during artillery practice. The radio was used there most successfully, reporting the position of targets and locating the position of hits.

This radio set weighs about 75 pounds complete, and is presumed to have a range of about 30 miles, but has not yet been tested for distance.

A receiving set for the aeroplane has not been developed up to this time.

Scouting.—Troops were located very easily and accurately by all the aeroplanes at the Connecticut maneuvers last August. The troops were not only located from altitudes of 2,500 feet, but their position was plotted on the map. Any troops the size of a company or larger were very easily located.

Targets, although the same color as the background, were picked up at Fort Riley last fall from a height of 1,500 to 2,500 feet at a distance of 3,600 to 4,500 yards.

Communication.—Besides radio, aeroplanes have communicated with the ground by dropping cards through a card chute and by smoke signals. The latter method was tried out at College Park and Fort Riley with more or less success.

Map making.—This has been tried with more or less success for two or three years at College Park and Augusta. A map of the country between Texas City and Fort Sam Houston showed railroads, roads, woods, towns, rivers, hills, cultivated land, and other military features. It covered 234 miles, and was drawn to a time scale—6 inches equaling 10 minutes of flight. All bearings were taken from a compass mounted on the aeroplane.

Photography.—Photographs have been taken from aeroplanes ever since the school opened at College Park in June, 1911. Some very good pictures have been taken, but up to the present time there has not been a standard aeroplane camera adopted. Photographs taken at 1,500 to 2,000 feet altitude show the topographical features of the ground very distinctly and, of course, very accurately.

Bomb dropping.—This has been tried only to a limited extent. The Scott bomb dropper was tried out, but the aeroplanes owned by the Government at the time of the trials did not have sufficient power to climb to over 300 feet with the added weight. However, dropping the bombs from that altitude proved that the principle of the apparatus was correct. Additional experiments are to be undertaken during the coming winter.

Appropriations for 1913, various countries.

France	$7,400,000
Germany	5,000,000
Russia	5,000,000
England	3,000,000
Japan	[1] 1,000,000
Italy	2,100,000
Mexico	400,000
United States	125,000
Total amount expended by the United States since the inception of the art	255,000

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[1] Approximate.

AERONAUTICAL NOTES.

On account of the important hearings on aeronautics in the Army before the Committee on Military Affairs, printed as a document of the House of Representatives in connection with H. R. 5304, the subject of aeronautics, although somewhat fully considered, is here given less space than would otherwise be the case, since a review of the subject is printed in the public document mentioned.

To the Committee on Military Affairs at this hearing a report was submitted by me outlining the general plan contemplated by the Signal Corps for the development of aeronautics in the United States Army and offering a summary of the status of military aeronautics in this country and abroad at the present time taken from the records of the aeronautical division of the Signal Office.[1]

AERONAUTICS IN THE ARMY.

In regard to the future of aviation it may be said that throughout the country the number of civilians who have heretofore undertaken to fly heavier-than-air machines for their own pleasure, for sport, or for money making, is fast diminishing, and that it is doubtful whether in the event of war a score of men capable of making flights useful to an army could be obtained from civil life at the present time. Aviation, which may be considered a sport by the people of the country at large, is to the Army a vital necessity.

The time for serious effort in this new military science is at hand. The situation is critical, and the Army must for its own protection train a sufficient number of its officers in the handling of aeroplanes and in reconnoissance work which military problems require. It is not believed that in case of need the country at large could give any military help in providing men not merely capable of piloting machines, but in performing necessary reconnoissance work. The Army must look to itself and to the men of the Organized Militia to supply a reasonable number of officers for military aviation in case of necessity. This necessity may arise at any moment. It is not a question so much of supplying aviators for a great war as it is for supplying these military scouts to accompany expeditionary forces or any military movement that may be undertaken, and also to provide a reasonable number for the defense from aerial attack of such vulnerable positions as Corregidor Island or the Panama Canal Zone. It is to be hoped that interest in all aeronautical work, both by aeroplane and dirigible, will be fostered throughout the country and will increase in the Army, the Organized Militia, and amongst civilians who will furnish the volunteers..

The work performed by the Signal Corps in aviation during the past few years has been inconspicuous, but it has been very great. Something has been created from nothing since the summer of 1909, when Mr. Orville Wright succeeded in winning a bonus of $5,000 offered by the Signal Corps for a flight of 5 miles out and 5 miles back from Fort Myer, Va. Much data has been compiled on the strength of materials, aerial forces, uses of radio telegraphy as applied to aeronautics, but most of all the knowledge of engines for aeroplanes has been acquired and the proper types of these machines have been carefully worked out, and valuable results have been obtained through the efforts of officers of the Signal Corps and those associated with them. Everything is prepared now for rapid progress and practical results will be obtained if the encouragement asked from Congress is extended. No doubt the development of the navigation of the air is " something new under the sun," but it promises to assume enormous proportions. Few doubt that we are on the verge of developing a great new science. It is no time now to make experimental changes, whatever the future may develop in regard to the organization of a separate corps. This may come, and may really be the fourth arm of the service; but now we are crossing the stream, and it is not time to swap horses or to make changes which will certainly cost the advance of military aviation many years of delay.

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[1] This report includes operations and status of the aeronautical division up to about August 15, 1913.

It is believed that the navigation of the air will be developed into a powerful military force, and when the preliminary steps have been carried to their conclusion and the present plans which are developing shall have had the chance to demonstrate their efficiency it may be that a new corps will be added to the military forces, but the time for the creation of a separate experimental force has not yet arrived. It is to be remembered that the science of the air requires the best efforts of the most highly trained men in aerial engineering, strength of materials, construction, composition, and testing of engines, uses of radiotelegraphy, knowledge of reconnoissance, meteorology, and photography; in short, trained and experienced men in or beyond middle life are required in the development of the science of aeronautics of the future, and in connection with the use of the dirigible, especially the highest degree of engineering science and expert knowledge of certain phases of chemistry are essential.

The pilot of the aeroplane, for whom we all have the highest respect, is the fighting man of the machine. He is the man behind the gun; but from the nature of things he must be a young, venturesome officer, generally without the knowledge of administrative and technical matters which can only come with years of experience and study, and then can come only to men of a certain type of mentality.

It is believed that the work of the aeronautics should be carried out along its present lines of development and be given every reasonable aid and encouragement by Congress.

Whatever may be the ultimate future of aeronautics in the United States Army, it appears certain that the immediate future should rest with the Signal Corps. Not only is the scientific knowledge of members of that corps necessary for the development of the science of aeronautics, but under the law the Signal Corps supervises the services of communication, observation, and reconnoissance as effected through wire, radiotelegraph and the telephone. Practically, at the present time, aeronautics applied to military affairs is merely an added means of communication, observation, and reconnoissance and as such ought to be coordinated with and subordinated to the general service of information and not erected into an independent and uncoordinated service. When the aeroplane and dirigible have demonstrated their value as fighting units other considerations may govern—not now.

AERONAUTICAL TRAINING AND INSTRUCTION.

The subject of aeronautical training and instruction naturally divides itself into two parts: First, the establishment of the necessary aeronautical centers and schools; and, second, the proper provision for the supply and instruction of the personnel engaged in the work.

The aeronautical center.—This brings up the question of the location of training schools and the establishment of aeronautical centers.

It may appear strange, considering the great number of military reservations which are in the possession of the United States, that but two or three can be found that offer even fair conditions for an aeronautical center and for training schools. In the first place, it is obvious that for all-year-round work a locality must be selected in a southern climate where weather conditions are favorable, for it is seldom that even the most skillful aviator can risk a flight in the northern winter when exposure to the cold causes hands and muscles to become benumbed and incapable of the delicate manipulation of the machine. A locality for the establishment of a first aeronautical center, and especially for training schools, therefore, must be looked for in the southern part of the country.

The many Army stations along the Atlantic coast of the United States are almost entirely unsuited to aviation training, on account of the average high wind velocities caused by proximity to the ocean. The Gulf coast is better in this respect, it is true, but lack of sufficient ground, loose sand, or undergrowth at places like Pensacola put these localities practically out of the question for instruction work. Galveston has been found utterly unsuited for preliminary training on account of weather.

In the Mississippi Valley wind conditions are, in general, very unfavorable to training, and the Government reservations throughout New Mexico and Arizona are so inaccessible as to be unsuited to the work. Undoubtedly there are many localities where the Government does not own the necessary ground that offer excellent sites for training schools. Of these, Augusta, Ga., is one and San Diego, Cal., another, the latter having the advantage from its location of permitting flights over land with aeroplanes and over water by hydroaeroplanes and flying boats; but the difficulty, as before stated, in regard to these places is that the Government does not possess the land, or, at least, sufficient suitable for the purpose. In addition, there are few if any troops at either. Obviously, neither should be selected for the first aviation center established, whatever may come later. In regard to preliminary training schools for beginners, however, the case is different. Here the new men, perhaps after a short course of instruction at the maker's establishment, would be placed for a course of instruction extending over three or four months, according to the aptitude of the individual, and there learn the principles of flying. Such establishments will require but a small plant, which may be placed on a field temporarily hired. Such a school may be established at any favorable locality. The difficulties that have been pointed out apply chiefly to the large and permanent aeronautical centers.

Ultimately, no doubt, several aeronautical centers will be established in the United States for the use and instruction of the Regular Army and the Organized Militia, and possibly for the use of civilian volunteers under promise to serve in time of war. But these considerations are for the future. *At this moment the urgent need is for the establishment of a first center.*

It requires no argument to prove that this first center should be located in a mild climate, so that work can be carried on the year round. It should also be evident that the first center should be placed at a locality where the Government already possesses a sufficient amount of available and suitable land; and, most important of all, in my opinion, it should be established at a permanent Army station where the aeronautical personnel can constantly have the advantage of serving with other troops.

The place in this country which best meets all of these conditions is Fort Sam Houston, San Antonio, Tex. Here the Government has a large reservation which has been inspected, and which will answer admirably for aeronautical work and for the buildings required at a center. Fort Sam Houston is a military depot and strategic center, and probably will remain so as long as the southern frontier runs as it does to-day. It is the station of troops of practically all arms of the service, except the Coast Artillery; and here are stationed officers of nearly all grades and arms of service to whom aeronautics as a military science must be of the greatest value. In addition to this, it may be mentioned as a fact of the immediate future that a great irrigation basin is about to be established within about twenty-five miles of San Antonio, where a reservoir some twelve or fifteen miles long by a mile or two wide will eventually be formed. The artificial lake resulting should offer an excellent place for the work of hydroaeroplanes and flying boats. In addition, San Antonio is a great railroad center, and the movements of troops, with flying machines and their accessories, can be readily undertaken in all directions. It is said that atmospheric conditions at this post are unfavorable to the aviation work of beginners, especially during certain seasons of the year when the ascending and descending air currents make it unsafe for inexperienced airmen to attempt flying. This may be true, and for that reason it may become necessary to give preliminary and intermediate training to the beginner, up to the point of the acquirement of the military aviator's license, at some preliminary training school. For this purpose San Diego is now being used. The finished flier should certainly find no difficulty under usual conditions in carrying on his training at San Antonio and in perfecting himself in cross-country work and in flying under service conditions. It is believed, however, that if the air conditions are understood at San Antonio it may be found that this place as an aeronautical center may be almost perfect during a large part of the year.

Such being the result of careful study of the aeronautical conditions of the country, it is proposed to establish at San Antonio the first aeronautical center for the Army and for the Organized Militia, provided the necessary funds and support are given by Congress. The Quartermaster Corps has been asked to include in its estimates for the fiscal year ending June 30, 1915, funds sufficient to cover the construction work falling to its share of the following buildings:

1 administration and school building.
1 barracks for 80 men.
1 field officer's quarters.
1 bachelor quarters (20 officers).
10 hangars, cement floors.
1 machine shop and storeroom.
1 garage shed for 16 automobile tractors.
1 stable (25 animals).

The administration and school building will provide the necessary offices for administration and for the instruction of officers in the various branches of scientific subjects which are applicable to aeronautics, such as radiotelegraphy, meteorology, photography, topography, the theory of explosion motors, the principles applicable to the testing of such motors, materials used in the construction of aeroplanes, strength of materials, strains, and air forces and currents, and later, of course, should take up chemistry as applied to the generation of hydrogen, and the many subjects entering into the construction and use of the dirigible. The field officer's quarters will be for the use and accommodation of the field officer commanding the center. The bachelor quarters will have accommodations for 20 officers, in which the necessary living rooms, mess hall, sleeping rooms, and attached baths are provided for the comfort and convenience of the officers detailed for aeronautical work. The 10 hangars proposed are to have cement floors and the most modern system of construction suitable for the shelter of aeroplanes. A machine shop, equipped with the necessary machine tools, is a prime requisite for such a station, and a storeroom is provided for under the same roof.

If the proposed aeroplane squadron of 8 machines is parked there it will be necessary, to render the squadron available for instant field service, to provide 16 automobile tractors for the transportation of the personnel and the heavy and bulky material needed in the care, repair, and maintenance of the aeroplane squadron. A garage shed for these 16 automobile tractors is provided for in the estimates. A stable will be required for the small number of public animals and officers' mounts necessary at such a station.

If the estimates for the dirigibles and the two revolving hangars are approved, in addition to the buildings estimated for above, large hangars of the German pattern must be erected. The modern gas plants required for generating hydrogen gas for the dirigibles are not bulky and it is not believed that any further buildings will be needed for them alone.

The establishment of the first aeronautical center at San Antonio should solve all immediate questions as to the progress and methods of procedure regarding aeronautics in the Army for the coming few years.

At the first aeronautical center will be formed and actually put in commission at least one aero squadron, consisting of eight machines with their accessories, as above mentioned. This squadron will be at the service of the Cavalry brigade, whose headquarters presumably will be near San Antonio. As at this center will be established a school for the study of those technical matters relating to aeronautics which are of such vital importance to progress of the art, the center may very well work in cooperation with the Aerodynamical Laboratory now established at the Smithsonian Institution for the settlement of higher questions pertaining to aeronautics.

It will be seen that the plan outlined contemplates the establishment of an actual center of aeronautics, and especially of aviation, at Fort Sam Houston, at which all officers engaged in flying, both of the Regular Army and of the Organized Militia, may obtain further training in the use of the aeroplane in reconnoissance work and with troops after having received preliminary and intermediate instruction leading up to the military aviator's license. Here, too, will be carried on the training of the observer in the study of the appearance of the country as seen from great altitudes, of bodies of troops, and of all objects of military interest. But no doubt one of the greatest advantages of such a center will be in its value as a center to which qualified aviators scattered through the country or with troops elsewhere may be gathered for a few weeks' practice at intervals of, say, a year, and where they can brush up their knowledge and practice. Such opportunity must be given to men who have become military aviators if they are to keep abreast of the times. Later it may be found that with proper supervision beginners can be trained throughout their course at the San Antonio school; but if this proves impracticable they will be given three or four months' training at some temporary school, as at Augusta or San Diego, and also a course of study and training at the grounds of the aeroplane manufacturers.

In addition to being a center of instruction, the first aeronautical center at San Antonio will be the actual station of an aviation squadron ready at any moment to take the field with troops. As officers are trained and experience accumulated it is presumed that other aero squadrons will be established, or a platoon or company of aeroplanes sent to divisional headquarters or within divisional territory for service with the divisions of the mobile army in the United States, Hawaii, the Philippines, and in the Canal Zone. In other words, the first aeronautical center will become a great supply and training station for this new service.

Additional aeronautical centers, of course, should later be established from time to time in various parts of the country, as the needs arise, for the training of the Organized Militia and perhaps of men who are to become volunteers.

BALLOONS.

Navigation of the air, as the science has come to be understood, consists of the use of both heavier-than-air craft, i. e., the aeroplane, and of the gas bag, whether free, captive, or dirigible. Of these only the dirigible will be considered here, and of these only the type known as the nonrigid or deflatable balloon.

It should be carefully noted that at the present time aerial navigation is much more than the mere flying of an aeroplane, and it seems probable, if we may judge from the persistency with which the Germans and French have adhered to the dirigible, the great development they have given it, and the interest the English are taking in this form of airship, that the day of the dirigible as an aerial cruiser is just about to dawn. It is therefore logical to consider the whole subject of aeronautics under the two heads of the aeroplane and the dirigible balloon and the uses and purposes of each.

Heretofore little attention has been paid to the dirigible in this country, but in the estimates which have been prepared this subject is taken into careful consideration.

The air craft that depends upon the levitating power of hydrogen gas for sustentation, although used long before the aeroplane was successfully achieved, were for a long time obscured in public interest by the dazzling achievements of the aeroplane, and it is only in the past two years that full and general appreciation of the proper rôle of each type of air craft has been accorded; and but recently have expert attention, military recognition, and liberal appropriations in Europe put the dirigible in the important place it now occupies in the aerial armaments of the leading nations abroad.

Although the comparison is trite it is none the less true that the dirigible is the aerial battleship; the aeroplane the scout boat, torpedo boat, or destroyer. Each has its work clearly defined, each must be constructed and used for certain phases of the aerial conflict, and due provision of each type must be made in any well-balanced system of aerial defense.

The field of activity of the aeroplane in war is fairly well known or estimated. Of the dirigible it may be said in general that it is far superior to the aeroplane for extended strategical reconnoissance. It may remain in the air for more than 40 hours, travel at 60 miles an hour, and hover any length of time over a given locality. In addition, the power to use long-range radiotelegraphy, both for sending and receiving, conduct night observations with powerful searchlights when necessary, all give it a field of usefulness in military affairs not covered by the aeroplane. For offensive warfare also the dirigible may carry rapid-fire guns and explosives up to two tons in weight, and hence be able to repel hostile aeroplane attack by superior power and range of armament. The destructive power of a ton or more of high explosives, delivered if needed at one blow, can not be doubted; hence the power of the dirigible against depots and structures. In such warfare there is no question of attacking troops or camps, but of the deliberate destruction of great centers, dockyards, bridges, dams, locks, or other works essential to the enemy. The widespread sowing of incendiary charges might work the destruction of a city; and it is admitted in many directions that an airship of recent type may seriously injure, if not destroy, a fighting ship or permanent fortification. These matters have been brought out in reports and the public prints, but it seems advisable to repeat them here to show why the estimates submitted this year put so much stress on an initial provision of dirigibles and the necessary hangars and gas plants for the use of the Army.

Two general classes of dirigibles are in use—the nonrigid and the rigid. (The semirigid is not considered.)

The nonrigid type depends upon the expansive power of gas to keep the envelope in proper shape, while the rigid type is supplied with interior wooden or metal framework for the same purpose.

The nonrigid type of dirigible is usually somewhat smaller than the rigid, can be deflated and loaded into cars, and is much better fitted for work with the mobile army than the rigid type. The rigid type is larger, carries greater loads, and is more formidable, but is subject to destruction if compelled to land at any other place than at its hangar, since it can not be deflated and dismantled in a reasonable time. In either type the home station should be provided with excellent hangars and gas plants. Recent experience abroad has shown that the new revolving-type hangar, permitting the opening to be faced in any direction from the wind, gives great certainty to launching or landing the huge machines.

In regard to the charging of the machines it may be briefly noted that some of the new hydrogen-gas generators and new chemical compounds used therewith show an astonishing capacity for the bulk and weight involved and give off gas at a rate of some 7,000 cubic feet per hour with machines that are semiportable. It is hoped that some of the new portable types will permit dispensing with hydrogen compressed in tubes, now necessary for field use of these balloons.

Reviewing the situation it appears that the first trials of these airships by the Army should be of the nonrigid type, these being suited to the peculiar service and geographical conditions which we have to meet and involving less risk in handling than the rigid type. The cost of the nonrigid is much less than the rigid. No firms in this country have as yet had sufficient experience in making these large types of dirigibles to attempt their manufacture, so it is believed necessary that the first two be bought abroad. It is not recommended that less than two be bought, since aerial machines are always subject to damage or destruction, and one should be kept in reserve while experience is being gained with the other. With time and encouragement no doubt these machines can be successfully turned out by our own manufacturers, and it is important that the Government should be able to buy them at home in case of need. The cost of each of the intermediate-sized dirigibles, as indicated from the price list of a leading maker abroad, is $175,750. The cost of an adequate rotating hangar as made abroad is $122,500. The cost of each gas plant is $8,955. A reserve of these is just as essential as a reserve in the number of dirigibles. If the portable gas plant is found to be reliable, its cost is about $7,500, and it will be possible to save the difference between this and the $85,450 estimated as the cost of tubes for compressed hydrogen. As stated in the foregoing, it is recommended that a plant be established at the aeronautical center at Fort Sam Houston.

It has not been determined how many officers and men should be assigned to the service of the dirigible, but it is probable that at least 3 officers and 50 men would be required for the maintenance and operation of each, in addition to the personnel assigned to aeroplane work.

The qualities required of officers for this assignment are somewhat different from those required with the aeroplane squadron. Older and more experienced men with some engineering training and ability seem to be necessary. This is in accord with statements previously made that aeronautical work in its full development is much broader and more complex than those who have viewed only the aviation side of it seem to think. Indeed, it is obvious that for the administration of practical aeronautics the flier and the constructor of the aeroplane alone are not only to be considered, but the solution of the great problems involved in aerial navigation requires the services of men of high technical training, ability, and administrative capacity.

Abstracts from reports of military attachés, consular reports, and domestic and foreign periodicals are full of reference to the great work being done, especially in Germany and France, by the dirigible, and the amazing increase now taking place in this branch of aeronautics.[1] It appears, therefore, that there should be little doubt that the time has come for us to move energetically in the matter of providing a few modern dirigibles and a trained force for their operation. To be without this branch of aeronautical equipment in the face of the array of facts presented by the statistics of its progress abroad is to admit that we can do without at least some of the scientific appliances in our great system of national defense and are willing to lag behind in the world's advance.

The estimates recommended show a great jump from the $125,000 that has been appropriated yearly for the purpose of aviation, but the time for half measures is past. The United States must go into this, if at all, in a way commensurate with the importance which the rest of the world acknowledges the subject to possess and which, it is believed, thinking men of the country consider vital. It is not only money that is asked from Congress by way of encouragement, but recognition in some more substantial way than is at present given to aeronautics, and especially to the actual flying men. These officers deserve the greatest honor and encouragement; the mere question of money should not and does not form the inducement for enterprising and plucky officers to undertake this dangerous service. It is true that practical questions involved make it proper at least that the aviator should receive enough to protect himself and those dependent on him from pecuniary loss in the event of accident; and the present law provides 35 per cent increase in pay and allowances for this reason. But it is not believed that this is sufficient compensation, and there are other points in which it is thought that this law should be modified, and a recommendation on the subject is submitted later in this report.

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[1] Extracts from these have been printed in the document aforementioned, i. e., Hearings before the Committee on Military Affairs.

TRAINING, AVIATION PERSONNEL.

It is now quite definitely assured that three stages exist in the training of military aviators.[1]

First. The beginner, who must receive training under the most favorable conditions of climate at a locality where, so far as possible, all the elements are to his advantage. This preliminary training may be considered to last through a period that will carry the beginner to the point where he is entitled to receive the license issued to pilots by the Aero Club of America (called that of the Federation Aeronautique International).

A second period of training should continue from the date of qualification for the Aero Club's license through a course of instruction in the use of the aeroplane in military reconnoissance, cross-country flights, and the aeroplane as a military machine. Upon the completion of this work the military aviator's certificate, issued by the War Department, together with a badge, are given the officer aviator.

Upon obtaining the military aviator's license the officer may be supposed capable of undertaking military work with the aeroplane, but the training with troops in cross-country and theoretical work should continue. Indeed, a military aviator thoroughly trained for his work can hardly be made under a year's hard practice.

Heretofore it has been thought that the preliminary or first period of training could be given at the schools of the principal manufacturers, and such was the case until recently, but it is now believed that general interest in the use of the aeroplane has fallen to such a low ebb that adequate training of military aviators can not be given at these schools. It is hoped that these conditions will change, but at present it is necessary that expert military trainers, of whom there are two or three in the service at present, should carry on the preliminary work of beginners up to the point when the student is sufficiently instructed to obtain the military aviator's license at the Government training station. Succeeding this should come a period of general service with troops.

So far as military aviation is concerned, since pilots and the reconnoissance officers who accompany them must be capable of relieving each other, both of these types can be drawn from but one class of men, viz, from the younger officers of the Army who volunteer.

It seems to be a fact that from civil life, as has been elsewhere pointed out, the number of pilots of aeroplanes at present available for military purposes in this country is negligible, and probably none exist who are trained both as pilots and in reconnoissance work. Furthermore, it is not believed that among the Organized Militia of the country more than a few such officers can be found. They have simply had no chance to receive the necessary training.

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[1] The French consider four.

At the present time the number of officers of the Regular Army allowed for this work is limited to 30, but at no time has so large a number been actually engaged in aeronautical duty. The officers so detailed, as a rule, remain but a short time in this service unless they have shown marked interest in and ability for the work. Of those now connected with aviation service in the field but four have been connected with this service for two years, and of those remaining only three for more than one year. Six have been sent back to their commands since June, 1911, and two have given up this service. Eight officers and one enlisted man have been killed in aeroplane accidents since 1908, the beginning of aviation.

Inducements to continue this hazardous work are very meager, indeed.

As has been said, after officers become military aviators much practice in cross-country flying should be given them that they may gain proper proficiency in reconnoissance work and certainty in managing machines under field conditions and training with troops. They are then qualified to instruct beginners; and at this stage it is said they really begin to enjoy the practice of their art and to gain personal satisfaction as the reward for their arduous and dangerous work. Practice can not be indefinitely continuous—men's nerves are not of iron—but practice should be recurrent, and after long periods of suspension and performance of other duty officers should be given the chance to renew their aviation training. Probably a month's detail each year at the aeronautical center would answer all purposes. Aside from the training of the officer, it is undoubtedly good policy to create a reserve of aviators made up of those who have received the certificate of military aviator; but this reserve, drawn from the Army alone, will necessarily be small and means must be found to increase it.

AN AERONAUTICAL RESERVE.

The attention of the Chief Signal Officer has within a few days of the completion of this report been markedly drawn to this subject, which is a matter of such importance that the attention of the Secretary of War is invited to it, although the information transpires in the month of October. I refer first to a suggested method of creating from the civilian aviators of the country a reserve corps of aviators for the use of the Army in case of need, and, second, to a movement reported from the State of New York to organize an aviation command within the Organized Militia of that State. Both plans are excellent in conception and should have encouragement.

A RESERVE CORPS OF MILITARY VOLUNTEER AVIATORS.

The importance to the defense of the country of a reserve of aeroplanes and aviators for war purposes is too obvious to require discussion. In regard to the first of these essentials it is believed that with the building up of Army aviation centers and a reasonable amount of money from Congress the matériel for the purpose is assured. Not so the personnel. Under the present law but 30 officers can be detailed from the Army for the purpose, and even should the force of aviators be increased to the fullest extent by detail of officers from the Army, the number of young officers willing to undertake the work, possessing the needful qualifications of temperament, youth, freedom from family ties, and fondness for sports, and who may be available for this duty, must ever be small if drawn from an Army the size of our own. Consequently a reserve recruited from the Army alone must be small—too small to meet the exigencies of a great war. Men grow old, their years of service in aviation are few, and a sustained reserve of reasonable size must have a large source of supply. Could the active Army provide this source, which it can not do without injury to itself, the output would still be small. It is of the greatest importance, therefore, that proper means be adopted by Congress and by the War Department to create a reserve in civil life of men capable of becoming military aviators from whom could be drawn volunteers for the aerial service of the country in time of war.

The plan[1] sent to this office suggests that the members of this volunteer corps should be taken from the best aviators of this country who in time of war or necessity will volunteer their services. Additional men will be added to this body as new aviators develop.

A record of each man will be kept, corrected to, say, six months, and will give name, address, type of machine and control, and other data, all of which should be kept on file in Washington. No doubt this information would be of the greatest value.

The reserve—called the United States Aviation Reserves—will be composed entirely of civilians, unless later placed upon the basis of the Organized Militia. It is intended in no way to affect the aeronautical corps of the Army or Navy, but simply to give its support if needed.

It is further stated that other countries started in this way, and this might be able to help a great deal in calling the attention of Congress to our needs.

The plan is worthy of serious consideration by both the War Department and by the aeronautical division of the Signal Corps.

The second movement referred to above is the organization of an aviation command within the Organized Militia.

The movement as reported has been inaugurated by individuals in the State of New York, as follows:

Certain members (of a provisional aviation battalion) have made application to the adjutant general of the State for recognition from the State of New York as a regular military corps organized for the purpose of military aviation. The said members have volunteered for the formation of a provisional aviation battalion. They have formed a regular corps, with officers selected for their efficiency in the positions which they hold, and it is stated[2] that the "said provisional aviation battalion is willing to be mustered into the National Guard of this State in accordance with the law governing such military procedure, etc. It is further recommended to form an 'aviation command (U. S. Army Regulations), known as the Aviation Division of the Signal Corps, New York.'"

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[1] NOTE.—This plan is drawn up and submitted by a gentleman from St. Louis, whose name is not given on account of regulations governing matters of this kind in reports.

[2] Letter from the commandant provisional aviation battalion to the adjacent general, New York, dated New York, Sept. 22, 1913.

This movement is regarded as of importance and worthy of encouragement by both the Militia Division and the Signal Corps, hence its mention here.

It is further stated that—

> There shall be five squadrons located in the military districts of New York, as follows: At Creedmore, Long Island, the first and second aero squadrons (land machines); on Manhasset Bay (adjacent to Creedmore), third aero squadron (hydro machines); at Albany, the fourth aero squadron (4 land and 4 hydro machines); at Buffalo, the fifth aero squadron (4 land and 4 hydro machines); and that each squadron shall be in command of a major, known as the commandant of the aviation center; and to serve with the said major there shall be a quartermaster (first lieutenant) as chief matériel, an assistant surgeon (first lieutenant), an adjutant (first lieutenant) as chief of administration. That the said 5 squadrons shall be in command of a lieutenant colonel, on whose staff shall be placed a quartermaster (captain) as chief of matériel, a surgeon (captain), an adjutant (captain) as chief of administration, a technical officer (captain), and a chief pilot (major), and that the said lieutenant colonel shall be known as the commandant of the aviation center for New York State, with headquarters at an armory in the city of New York.

LANGLEY AERODYNAMICAL LABORATORY.

The Langley aerodynamical laboratory of the Smithsonian Institution, which was closed after the death of the late director, Dr. Samuel P. Langley, has been reopened, and has, by direction of the Board of Regents of that Institution, been reorganized and placed under the direction of an advisory committee.

The Departments of War, Navy, Commerce, and Agriculture, through their Secretaries, were invited to designate representatives to serve on this committee, together with a number of civilians who have been prominently connected with scientific matters pertaining to aeronautics.

The Secretary of War designated the Chief Signal Officer of the Army and a field officer of the Signal Corps as representatives of the War Department.

VI. COAST OBSERVATION AND COAST PATROL.

The attention of the Secretary of War is invited to an important element of the coast defense which pertains to the Signal Corps of the Army and should, in the opinion of the Chief Signal Officer, receive the consideration it deserves in order that when need arises the necessary plans may be ready and material at hand.

The reference is to an adequate system of coast patrol or observation, a matter that has not received from the Army the attention it deserves. It is true that designs for radio and signal stations have been drawn up by the Signal Corps, and, in several instances, the structures have been erected in the Artillery districts; but great stretches of coast, often containing good harbors and magnificent lookout stations, occupied by the executive branches of the Government, at which valuable information of friend or enemy at sea may be gathered, remain not only unprovided with signal stations but are generally unprepared for use in war, which is a condition that should be changed.

Of course, it is assumed that when needed these outposts will be given necessary equipment; but for this no provision has yet been made by the Signal Corps of the Army. This state of unpreparedness in regard to an important factor of the defense should not be attributed to lack of foresight or to negligence on the part of the Army, but considered due, first, to the fact that coast defense as a whole has not yet been taken up in detail, and, second, to lack of means and multiplicity of duties imposed upon the small Signal Corps of the Army by whom the systems of coast patrol should be planned and lines of information be installed and operated when authorized.

It appears that a patrol of the coast has been well planned by the Navy, who, it is understood, have included in this service officers and men drawn from the various executive departments of the Government, from the Naval Militia, and from the Volunteers, all of whom will be under the control of the Navy Department in war. It seems that the Signal Corps of the Army should, without delay, be authorized to take up this matter and through a properly organized patrol of its own creation carry on this important work. It is believed that without the full cooperation of the Signal Corps and the participation of troops trained in the service of lines of information, and in establishment of signal stations and in the use of flying telegraph and buzzer lines, the telephone and field radio, cables, visual apparatus, and perhaps the aeroplane and balloon, it is hard to see not merely how the best methods of gathering intelligence in war can be employed by a coast patrol, but how, when so gathered, this intelligence can be transmitted to the centers of control, to Artillery fixed positions, and their auxiliaries, and to the mobile army, from distant observation stations, coast islands and lighthouses, or from the floating auxiliaries and passing ships, with the speed and certainty which alone make such information valuable.

The transmission of intelligence should be intrusted only to trained men under military control, supplied with the best known appliances for this service, and should never be left to the chance efforts of any irresponsible person who can use a key or a radio instrument. In other words, it is recommended, should a patrol be authorized that it be organized under the Signal Corps of the Army, and that the section of the coast patrol to which the *duty of transmission of information is intrusted should be composed of men trained in naval and military signaling and in the methods of the Signal Corps.* In addition, it is presumed that signalmen of the Army and of the Militia will be detailed aboard scout ships, patrol and picket boats, and other floating auxiliaries, for duty as radio and visual signalmen, but this is a detail that need not be considered here.

From what has been said it appears that in case of threatened invasion the coast patrol, if organized, will become one of the strongest arms of that service of security and information upon which so much dependence is necessarily placed in modern war, and in consequence that this patrol when organized will be thoroughly efficient in numbers, personnel, organization, and equipment, and that its men, who are frequently placed at lonely stations and required to act upon their own initiative, will be not only steady, well-disciplined soldiers, but in addition will be intelligent, keen, and watchful men, skilled as observers and trained in the use of the telegraph and of mechanical appliances; and above all, that they will possess that judgment which seldom blunders in its work. Fortunately for the country, men of this character are many in civil life, and will be found in abundance among the volunteers called out in war. As to the organization of a patrol, it should appear that none better can be found than that approved by the experience of the Signal Corps of the Army, whose duties are similar if not identical with those of the coast patrol, though more widely extended. The equipment, too, should be that of the regular service. In short, it is believed that the coast patrol of the Army should be organized, trained, and equipped by the Signal Corps, and that the collection of information, so far as it relates to this service and its transmission in coast defense, should, as with the Army in the field, be placed under the charge of the Chief Signal Officer of the Army, acting through a subordinate officer in immediate control at the front. The men of this organization can not and need not be actually present during peace, except those of the executive departments of the Government, and hence the actual enrollment of the personnel may be left to a later period, but plans of organization should be undertaken without delay and the necessary material provided.

COAST PATROL AND ORGANIZED MILITIA.

The training of a coast patrol will include the installation and use of signal equipment of all kinds; the operation of field and station radio; the establishment of observation stations; the service and maintenance of lines of field telegraph and buzzer; and, in general, in the collection and transmission of military information by all approved methods. There seems no reason why this instruction should not be given to the signal organizations of the militia, as is now done for the artillery and infantry of the State troops in connection with the yearly exercises or maneuvers of the Coast Artillery of the Army. To do this would simply mean the extension of the present valuable training of the militia to include instruction in the service of a coast patrol within certain prescribed limits and would give to the signalmen of the militia training in a branch of Signal Corps work of great importance to them, especially in those States which border the sea. Furthermore, it is believed that the plans for an organized coast patrol will provide that in war the signalmen of the militia be formed into companies and regiments with the signal troops of the Regular Army and with the necessary number of technical men of the volunteers taken from telegraph operators and telephone men of civil life in such proportion that the whole shall form an effective service.

As a further step in preparation for coast defense it is suggested that the Signal Corps of the Army be authorized to provide at Government reservations, such as lighthouses, marine hospitals, and life-saving stations, and those of other executive departments, suitable as lookout stations, magazines of material of the less perishable sort which will furnish part of the means of establishing observation stations at the outbreak of war. In addition, island stations and lightships should be connected by cable (out of use in peace and with the ends prepared for periodic testing to insure their perfect condition) with the interior or mainland stations, whence the military field telegraph could rapidly be extended at need to commercial offices and certainly be provided with the portable radio sets at the inception of hostilities. A reserve of sets should be provided, and provided in time, since they require months in the making. In this way many permanent and important lookout stations of the civil departments of the Government which are always on duty—Point Judith, as an instance—will, when needed for coast-guard service, be ready for almost immediate use. At mainland stations of the Government should be placed signal stores of a bulky character, telegraph or telephone material, wire, lance poles, supplies for electrical batteries, flags, and other apparatus for the use of the communications, both visual and electrical, in war.

These preparations should not be put off to the day of stress, sure to precede hostilities; for if the stations and material needed are ready, the men necessary to use the radio and equipment and construct lines of field telegraph and buzzer can be quickly placed on duty in an emergency. It is probable that most of the valuable observation points of the coast are now occupied by Government stations of one service or another and could safely be provided with necessary material, with a reserve of delicate apparatus stored for use when needed; but others are so circumstanced that nothing should be done by way of preparation until hostilities threaten, since, if not owned by the Government, magazines can not wisely be established at them. Such points can, however, and should, be carefully marked, their character made known, and, possibly in the case of very important localities, material for their conversion into signal stations be stored at the nearest artillery post.

Enough—perhaps too much—space has been given to the coast patrol, but the subject is new and interesting and sufficiently important to warrant careful attention. With no factor of the defense is the Signal Corps of the Army more intimately connected, and it should be evident that without signalmen a coast patrol will be feeble indeed.

VII. RECOMMENDATIONS.

TO INCREASE THE EFFICIENCY OF THE SIGNAL CORPS OF THE ARMY.

In view of what has been previously stated, the following recommendations are made:

First: That a bill be enacted into law to increase the efficiency of the Signal Corps of the Army measurably identical with that, as amended, introduced January 9, 1908, in the first session of the Sixtieth Congress, by Mr. Hepburn, of Iowa. In a report on this bill it was recommended by the Committee on Military Affairs that "it do pass with the following amendments," and regarding it Mr. Hull, of Iowa, then chairman of the committee, submitted on January 26, 1909, a report, concluding with the remark that—

> The committee also submits some extracts from reports from the chief umpire on summer maneuvers of 1908 and believe that no more important legislation for the effective organization of the Army can possibly be enacted than this increase of the Signal Corps.

This bill as amended should be corrected in order to comply with present requirements to provide that the Signal Corps of the Army shall consist of—

> One Chief Signal Officer, with the rank of brigadier general; 3 colonels; 3 lieutenant colonels; 10 majors; 40 captains; 48 first lieutenants; 60 master signal electricians; 240 first-class sergeants; 250 sergeants; 350 corporals; 1,000 first-class privates; 300 privates; 40 cooks; 16 farriers; 16 horseshoers; 16 saddlers; 32 wagoners; and 50 trumpeters; and each grade shall receive the rank, pay, and allowances as now provided by law: *Provided*, That the Chief Signal Officer of the Army shall be appointed as now provided by law, and vacancies thus created shall be filled, first, by the promotion of officers holding permanent appointments in the Signal Corps according to seniority after the examination now required by law, and, second, by details to the Signal Corps from the Army at large from the grade in which the vacancy exists or from the grade below: *Provided*, That officers so detailed in the grades below that of major shall not be again eligible for such detail until they shall have served for at least one year away from that corps: *Provided further*, That the Signal Corps of the Army shall be organized as may be directed by the President of the United States, and the officers and enlisted men assigned to duty with troops shall, when so specially designated by the President, constitute a part of the line of the Army.

This suggested bill as corrected is not intended to make provision for an aeronautical service.

Since the bill for Signal Corps organization, introduced in 1908, there has been a great increase in the demand for field organizations of the Signal Corps, and in field service regulations and existing general orders there has been a recognition of field companies and telegraph companies of the Signal Corps for service with the mobile Army. The military forces of the country are now apportioned among six divisional and territorial commands. As field service regulations recognize the need of 1 field battalion for each division, 12 Signal Corps companies (6 battalions) should be provided. It would appear that for due training and use in connection with large camps that may be established four telegraph companies would be a proper assignment. In addition certain organizations, which have been named depot companies, are required to be distributed throughout the country to take care of the elaborate post telephone systems now in existence and the important target-range installations. In addition there should be assignments of Signal Corps operators to the military telegraph offices, many of which are now unsatisfactorily filled by civilian employees. There should be a suitable percentage of the Signal Corps men undergoing training at the enlisted men's schools. For all purposes, excepting aviation, it is estimated that a total enlistment of 2,370 men be provided, say 2,400 enlisted men.

After more than twelve years' experience with the detail system in the Signal Corps and a full recognition of the advantages that mutually result to the line of the Army and to the Signal Corps, it is now seen by the light of experience that some modification of this system is required if the best efficiency is to be realized from a technical corps. As matters are now shaping, the Signal Corps will soon become a technical corps without technical officers.

The Corps has received from the line 29 of its present personnel, and but 17 of the permanent corps remain.

Many of the detailed officers have shown rare devotion and ability in the performance of their duties; still, there is no question that a technical corps can not continually stand the drain upon its trained officers to which the Signal Corps is now subjected. A change in the present method of detail is imperative; it is therefore earnestly recommended that as long as the Signal Corps remains a corps whose officers come to it by detail the latter should receive the same incentive as provided by the present system of detail in the Ordnance Department.

AVIATION ORGANIZATION (RECOMMENDED).

The Army of the United States has been recently segregated into six divisional and territorial commands. These are tactical units, and, as it is believed necessary that a considerable aeronautical organization should be assigned as a part of each main tactical unit, boards of officers have reported that an organization called an aeronautical squadron should be assigned with each of these tactical units to serve as a component part thereof for peace training or for service in war.

On account of the present reduced strength of these divisions, it has been recommended, from economical considerations, that at present the organization of only four aeronautical squadrons be authorized and that two of these be subdivided so that distribution may be made of the subdivisions among the tactical units requiring them. The four aero squadrons thus formed should be placed at appropriate aeronautical centers, each under the command of a field officer and serving incidentally as a center of aeronautical instruction.

The organization and equipment of each of the aeronautical squadrons and the reasons leading up to them are as follows:

It is desirable to assign for the operation of an aeroplane two officers, who alternate in long cross-country flights as observer and aviator or pilot. Both should be capable of handling the machine in case of the death or disability of the man at the lever. It has been found also by experience at home and abroad that at least five enlisted men are required in the care, repair, and handling of an aeroplane. This necessary personnel—two officers and five men—constitute the personnel for one aeroplane or a section. Two aeroplanes and their sections are proposed as the platoon; two platoons compose the company; and two companies, commanded by a major, constitute the aero squadron. *The aero squadron is the tactical unit proposed for assignment to a division.*

In the assignment of officers to the companies it is assumed that the eight aviators are acting either as instructors or pupils, and it is highly desirable that they should not be included in any of the administrative or property work of the organization. In other words, the company should be regarded somewhat as a school organization. To each company, whether on a peace or war footing, it is most desirable to assign an officer as executive and property officer who will not be an aviator and not subjected to the unusual risk which such service involves.

PERSONNEL OF AERO COMPANY.

8 officers, aviators (captains or first lieutenants).
1 officer, executive and property officer (captain or lieutenant).
1 master signal electrician (to replace civilian aeronautical engine expert at present employed at high salary).
2 first-class sergeants (1 as first sergeant and 1 as supply sergeant).
5 sergeants (1 in charge of each aeroplane and 1 as mess sergeant and as assistant to first sergeant in clerical work).
9 corporals (1 on duty with each aeroplane and 1 as chauffeur for each company motor vehicle).
2 cooks.
14 first-class privates (3 with each aeroplane and 2 as musician orderlies).
6 privates (for general use and to replace vacancies in aeroplane crews).
Total commissioned, 9; total enlisted, 39.

PERSONNEL OF FIELD AND STAFF OF AERO SQUADRON.

The squadron, being composed of two companies organized as above, should be provided with the following staff:

1 major (commanding squadron).
1 captain (adjutant and supply officer).
2 master signal electricians (necessary for duty with the more important aeronautical centers).
2 first-class sergeants (1 sergeant major and 1 supply sergeant).
6 corporals (chauffeurs of squadron motor vehicles).
2 first-class privates (musician orderlies).
Totals:

	Commissioned.	Enlisted.
Squadron, field and staff	2	12
Two companies	18	78
Total for each squadron	20	90
Total for four squadrons	80	360

It is suggested that in addition to the officers required for the aero squadrons, there should be in the office of the Chief Signal Officer of the Army a colonel of the Signal Corps assigned especially to aeronautical duty, and one lieutenant colonel to be assigned to such aeronautical service as may be required.

For the peace assignment, instead of two officer aviators to each section, one officer per aeroplane is recommended. In case of war it is considered necessary to have two aviators assigned to each aeroplane, but this expansion could be made upon mobilization for service in the field.

REWARD TO AVIATORS (RECOMMENDED).

Legislation is asked to provide a proper recognition of men who engage in the extra hazardous service of aviation. The rewards which have been offered to officers in this important service have so far been inadequate and have not resulted in securing even the limited number for aviation duty now authorized by law. Some generous provision must be made to secure these officers. It is proposed, therefore, to extend to aviation the ordnance detail system to include the four majors that are hoped will be provided; to give an increase of 100 per cent in the pay of their grade to officers in aeronautical service who are detailed on the actual duty of operating aeronautical craft; to increase the pay of each enlisted man 50 per cent; to provide that there shall be paid to the widow or heirs of any officer or enlisted man who dies or who has died as the result of an aeronautical accident in the line of duty, or to any other person previously designated by him, an amount equal to six months' pay at the rate received by him at the time of his death, in addition to the amount provided to be paid by the act approved May 11, 1908; and finally, to provide that any officer detailed on aeronautical duty and who has been or shall be injured in an aeronautical accident in the line of duty and is disabled thereby to the extent of necessitating his retirement from active service in the Army, shall receive the full pay to which he is entitled when so retired.

AVIATION TRANSPORTATION (RECOMMENDED).

In addition to the personnel and the aeroplanes themselves, transportation in the shape of automobiles and motor cycles is necessary in the aviation service. The organization outlined above requires for transportation of personnel, spare parts, gasoline, etc., belonging to the combat train of each company, 5 automobile tractors and 2 motor cycles; for the squadron reserve train, 6 automobile tractors and 2 motor cycles; a total of 16 automobile tractors and 6 motor cycles.

Squadron headquarters:
  1 aeroplane tractor for personnel (7-passenger chassis).
  3 aeroplane tractors for repair parts, wings, engines, etc.
  1 aeroplane tractor for repair shop.
  1 tank tractor for gasoline and oil.
  2 motor cycles.
Each aero company:
  1 aeroplane tractor for personnel (7-passenger chassis).
  4 aeroplane tractors for towing aeroplanes (7-passenger chassis).
  2 motor cycles for musician orderlies and for messenger work.

ADDITIONAL PAY FOR TELEGRAPH OPERATORS (RECOMMENDED).

Third. The act of May 11, 1908, provides for additional pay for enlisted men in Coast and Field Artillery for special skill as plotters, gun pointers, casemate electricians, first and second class gunners, and in other branches of the service for expert riflemen, sharpshooters, and marksmen. The instruments above all others in which the Signal Corps men must be expert are telegraph instruments used either on the field lines, wire lines, over submarine cables, or in radiotelegraphy. Special skill in the use of these instruments corresponds exactly to special skill provided for and rewarded under the act of May 11, 1908, as above stated. The commanding general must have great confidence and dependence in these men, and it seems very just and proper to compare the value to the Government of this professional attainment with the value of those enumerated above for which additional pay is already provided.

At present the only way of increasing the pay of expert operators is by appointing them to the grade of noncommissioned officers, or of increasing their rank in that status. From this it may readily result that men—excellent as telegraphers, but wanting in other qualities necessary in noncommissioned officers; for instance, ability to control men—may be given warrants of appointment to secure for them the extra pay which is their due.

Such additional pay would be a great stimulus to the attainment of skill by operators, and thus improve the service.

It is urged, therefore, that legislation be enacted providing for additional monthly pay for the following enlisted men of the Signal Corps:

Expert telegraph operators, by wire line, cable and radio, (three method), seven (7) dollars per month.

Operators by wire line, and in addition, cable or radio, (two method), five (5) dollars per month.

Operators by wire line, cable or radio, (one method), three (3) dollars per month.

These amounts to be in addition to the pay proper and to be given in accordance with such regulations as may be prescribed by the Secretary of War.

It is further recommended that men of the first category be designated as military telegraphers, first class; men of the second category as military telegraphers, second class; men of the third category as military telegraphers, third class; and that they be given distinctive insigna, to be later determined.

It is well recognized in the service that men possessed of these special qualifications are fully deserving of this additional pay and are worth it to the Government.

RATING OF RADIO OPERATORS (RECOMMENDED).

Fourth. The position of radio operator on board ship is a most important one. Upon his unremitting attention and skillful performance of duty much may depend. It follows that these men should possess ability and character and should be so treated that they are at all times ready to render a willing, zealous, and cheerful performance of duty. It is understood that on merchant ships the radio operators are counted among the ship's officers and messed and quartered as such. They wear a distinctive insignia. In the United States Navy the radio operators are rated in accordance with the high

REPORT OF THE CHIEF OF COAST ARTILLERY.

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War Department,
Office of the Chief of Staff,
Coast Artillery Division,
Washington, October 31, 1913.

From: Chief of Coast Artillery.
To: Chief of Staff.
Subject: Annual report.

I submit herewith an annual report on the personnel and matériel of the Coast Artillery.

STRENGTH OF THE COAST ARTILLERY CORPS.

On June 30, 1913, the actual strength of the Coast Artillery Corps was 748 officers (excluding 14 chaplains) and 16,628 enlisted men. The strength authorized by law is 751 officers (excluding 14 chaplains) and 18,471 enlisted men.

The strength of the Coast Artillery Corps was therefore, on June 30, 1913, below the strength authorized by law 3 officers and 1,843 enlisted men.

The following table shows the personnel required to provide one complete manning body for all of the elements of all coast defenses now constructed and appropriated for under the adopted policy that the Coast Artillery of the Regular Army shall man fully all of the guns, mortars, mines, and accessory matériel in the insular possessions and the Canal Zone and all of the mines and one-half of the guns, mortars, and their accessory equipment in the United States proper, and that the Militia Coast Artillery shall man one-half of the guns and mortars of the defenses of the United States proper:

Defenses constructed and appropriated for.	Officers.	Men.
Regular Coast Artillery required for all mines, power and light plants of home defenses	169	4,970
Regular Coast Artillery required for all mines, power and light plants of insular and canal defenses	43	1,194
Regular Coast Artillery required for all gun defenses of insular and canal defenses	220	5,040
Regular Coast Artillery required for one-half of all gun defenses of home defenses	796	18,547
Total Regular Coast Artillery required	1,228	29,751
Total Militia Coast Artillery required	796	18,547
Total force, regulars and militia, required	2,024	48,298

From the foregoing it will be seen that the present authorized strength of the regular Coast Artillery Corps is short 477 officers and 11,280 enlisted men of the strength required to man our coast defenses under the adopted policy outlined above.

The progress that has been made in the construction of the over-sea defenses will require that garrisons be provided for them at an early date. After manning all over-sea defenses now constructed or appropriated for, and all home mine defenses, there will remain but 319 officers and 7,267 regular Coast Artillery troops for the service of the gun batteries in the United States, which is less than one-fourth of one relief. It is evident, therefore, that the withdrawal of the Coast Artillery troops from the home coast defenses to provide garrisons for the over-sea defenses will make the weakness of the home garrisons a grave condition.

The Organized Militia is not provided by the States in sufficient strength to furnish its quota (one-half of one relief) of the manning detail for the gun defenses of the United States, as appears from the following table:

The Militia Coast Artillery organized and available for service as reported at the last annual inspection.

State.	Number of companies.	Officers.	Enlisted men.
Maine	12	48	639
New Hampshire	4	16	199
Massachusetts	12	49	742
Rhode Island	17	69	944
Connecticut	13	42	669
New York	31	110	1,897
Maryland	1	3	36
North Carolina	6	21	334
South Carolina	1	1	49
Georgia	4	14	182
Texas	1	3	61
California	12	37	712
Oregon	8	33	546
Washington	5	22	233
New Jersey			
Delaware			
District of Columbia			
Virginia			
Alabama			
Louisiana			
Total	127	468	7,243

The adequate manning of the home defenses thus assumes a grave aspect. It is, therefore, recommended that the States be urged to provide their due proportion of Militia Coast Artillery troops, and that suitable legislation be asked of Congress to provide for the proportion of Regular Coast Artillery troops required of the Federal Government in this manning force.

ENLISTED SPECIALISTS.

Among the technical noncommissioned staff officers of the Coast Artillery Corps called "enlisted specialists" there are three distinct classes—the electrical, whose duties are, briefly, to operate and maintain the electrical installation, searchlights, radio stations, etc.; the mechanical, whose duties are, briefly, to operate and maintain power plants, machine shops, etc.; the artillery, whose duties are, briefly, to maintain in thoroughly efficient condition the armament proper—guns, carriages, range and position finders, plotting boards, and all accessory devices connected directly with accurate and rapid firing of the armament.

These classes are equally important, and similar grades in each class should be given equal pay and allowances; the opportunity for advancement should be equal in all three classes, and promotion to any grade in any class should be limited to those holding the next lower grade in that class.

To the electrical specialists there should be added another division, viz: the radio operators, now needed in all coast defenses. These men are a product of the Coast Artillery School and their work is of the highest order. Since it can not be expected that men possessing their qualifications will remain in the service unless suitable provision is made for them, and since enlisted men can not be spared from the guns for use in radio stations, legislation is recommended to create a grade of electrician sergeants, third class. There should be 90 sergeants of this grade, which will provide 3 radio operators for each coast defense.

Because of the demands now being made and very soon to be made for enlisted specialists for the coast defenses of the insular possessions and Panama, substantial increase in the numbers of each class is a pressing necessity, and is earnestly recommended.

EFFICIENCY OF COAST ARTILLERY.

The Coast Artillery service for the past year has maintained its high standard. Its efficiency has attracted the attention of other Governments, especially those of South America. An officer of the Coast Artillery Corps of the United States is giving instruction to the Chilean Coast Artillery, and two Chilean officers are taking the course of instruction at the Coast Artillery School. The Government of Brazil has shown active interest in the coast defenses of the United States, and one of the objects of the recent visit of Dr. Lauro Müller, prime minister of Brazil to the United States, was to examine our coast defenses with a view to making recommendations to his Government in regard thereto. Permission has also been granted the Government of Brazil to send two officers to the Coast Artillery School to enter the next class.

ORGANIZATION AND ADMINISTRATION.

Districts.—An important change in the higher administration of Coast Artillery was made by General Orders, No. 9, War Department, February 6, 1913, under the provisions of which the Coast Artillery troops serving within the continental limits of the United States were organized into three Coast Artillery districts—the North Atlantic, the South Atlantic, and the Pacific. This organization has proved well adapted to the tactical and administrative needs of the Coast

Artillery. In view of the size and importance of these commands, and of the fact that in the new scheme of Army organization, these districts correspond to brigades of the mobile army, it is believed that the commanding officers of these districts should have the rank of brigadier general. Another Coast Artillery district should be organized in the Philippines, to consist of the Coast Defenses of Manila Bay and of Subic Bay.

To complete the organization of the Coast Artillery I therefore recommend that a suitable bill be presented to Congress embodying the recommendations that the Coast Artillery Corps be increased by four general officers.

Coast defense commands.—A scheme for unifying the administration of coast defense commands, as described in the last annual report of the Chief of Coast Artillery (1912), after trial for a year in the Coast Defenses of Long Island Sound, was reported on by the commanding officer of those defenses as eminently successful in effecting a large saving in personnel, cost, and paper work. As a result of this trial, and of this favorable report, this system of administration has been put into effect in other coast defense commands.

FORTIFICATIONS.

Continental United States.—The system of fixed coast defenses for the United States recommended by the Endicott Board in 1886, and since modified by the National Coast Defense Board in 1906, has now practically been completed so far as relates to the installation of heavy gun batteries, with the exception of the entrance to Chesapeake Bay. San Pedro, Cal., the port of Los Angeles, has recently been added to the list of ports to be defended. Appropriations have been made to initiate both of these projects.

For the home ports of the United States, with the exceptions above noted, there now remain in the gun defense only the completion of the supply of ammunition and the extension of the standard fire-control system, including the necessary searchlights. These deficiencies are being supplied from year to year at a satisfactory rate, thanks to the liberal policy of Congress with respect to coast defense.

Consideration is invited to the increasing importance of San Diego, Cal., due to the rapid growth of its population, the deepening of its channel, and the position it will occupy relative to trade through the Panama Canal. It is recommended that the fixed defenses of this harbor be strengthened by two mortar batteries of four mortars each.

Philippine Islands.—Fortification construction continues at the entrance to Manila Bay, and has progressed to include the completion of Fort Frank, Carabao Island; that at El Fraile and Caballo Islands is making good progress.

Canal Zone.—In the Canal Zone battery construction has proceeded rapidly.

Oahu.—The seacoast defenses of Oahu as projected are now practically finished, with the exception of two rapid-fire batteries at Fort Kamehameha; these will be well advanced, if not completed, by the end of the present calendar year. The necessary personnel for both guns and mines has been sent to Oahu from time to time as these defenses have become ready for service.

Of the four Coast Artillery posts in Oahu, but one (Fort Ruger, with two companies) has been provided with permanent quarters. Permanent post construction is especially urgent at Fort Kamehameha, where three companies are now stationed and must live under canvas until provision is made for permanent barracks and quarters. This post is remote from Honolulu, located on low, sandy ground, and suitable shelter is necessary not only for the health and comfort of the garrison but as a matter of economy. An adequate water supply for this post should be given early consideration.

The pressing need for troops of the mobile army for the land defense at Oahu was emphasized by my predecessor in his annual report for 1909. This need is now being met, following the scheme for the defense of Oahu formulated by a board of officers, of which Brig. Gen. M. M. Macomb was president, which submitted its report September 6, 1912. This plan contemplates the service of certain guns emplaced for land defense by Coast Artillery troops.

Guantanamo.—A board of officers of the Army and Navy, appointed for the purpose of preparing a scheme of defense for the naval base of Guantanamo, Cuba, submitted its report in April, 1913. The first necessity for the development of Guantanamo as a protected naval base is the procurement of a supply of fresh water adequate to the needs of the proposed establishment. The board believes that such a supply can be secured.

SUBMARINE MINE DEFENSE.

With the exception of cable, the supply of the essential parts for the mine defense has been completed at nearly all fortified harbors.

Cable.—The need of making immediate provision for the additional cable necessary to complete these mine projects is an urgent one, and estimates to purchase this have been submitted for the next fiscal year.

On account of the need of an efficient mine field immediately upon the outbreak of war, the complete mining equipment of every harbor should always be kept on hand. The cable required to operate the mines, no less than the mine cases and the necessary electrical apparatus, must be manufactured to order and cannot be purchased in the open market. As submarine cable in commercial usage is usually bought under special specifications it is seldom carried in stock but is made up only when required by a particular purchaser. It should also be borne in mind that the conditions which our cable must meet, such as maximum reliability, minimum weight, long lengths on a reel, suitability for storage for indefinite periods, are such as pertain to our service alone, and the cable which is manufactured to meet these needs is a special article of manufacture, requiring special material and special care in manufacture.

Mine planters.—There are now eight mine planters provided for mining instruction in peace and for planting mines in case of war. These planters have been normally distributed as follows: Atlantic coast, 4; Pacific coast, 2; Philippine Islands, 2.

The Fortification Bill passed in February of this year provided for mine equipment for Oahu. This equipment has in a great measure been provided and the personnel sent to Oahu for the mine defense. For the purpose of instructing the mine companies there the mine planter *Ringgold* was ordered in May, 1913, to proceed to Honolulu. As this vessel can not be spared from the Pacific coast, a mine planter should be provided for Oahu.

At Fort Mills, P. I., it has been necessary to supplement the use of the harbor boats by requiring the mine planters to perform a certain amount of passenger and freight service. This has resulted in seriously impairing the mine instruction of the Coast Artillery personnel. It is recommended that a harbor boat be provided for service at Fort Mills so that the mine planter may be at all times available for submarine mine and other artillery work.

As mine defense has been authorized for both ends of the Panama Canal it will be necessary to have a mine planter there. One planter with two distribution box boats and necessary yawl boats will suffice for both entrances.

Large distribution box boats to assist the planters are necessary in the Coast Defenses of San Francisco, Puget Sound, and Long Island Sound. Experience has shown that it is impracticable to plant mines sucessfully in the waters outside the Golden Gate, in certain parts of Puget Sound, and at the race in Long Island Sound, using the present type of distribution box boats. There will be no difficulty in doing so if longer, more seaworthy boats be provided. Two of these boats, 70 feet in length, have been provided for service in the Philippine Islands and two additional large boats are recommended, besides the distribution box boats required for Panama and Oahu.

Torpedo Depot.—The matériel required for the submarine mine defense is supplied from the Torpedo Depot at Fort Totten, N. Y., by the disbursing officer, who purchases and issues it under rules prescribed by the Secretary of War.

During the year this depot has continued to purchase and supply the matériel necessary for the maintenance and operation of the existing mine equipment; it has also supplied new equipment to localities where needed, and has designed and developed new matériel to meet the various requirements which have arisen.

Special attention has been paid to the revision of many of the specifications under which the principal items of the submarine mine equipment are purchased and inspected.

TARGET PRACTICE AND INSTRUCTION.

Target practice.—With a view to improving the accuracy of fire of coast guns, the following new features have been introduced in the Regulations for the Instruction and Target Practice of Coast Artillery Troops, 1913:

(*a*) Special attention to prediction work.

(*b*) Greater stress laid on careful handling and serving ammunition.

(*c*) Firing of trial shots immediately before record practice.

(*d*) Determination of the mean velocity from the trial shots by ballistic methods.

(*e*) A full analysis of each practice in each coast defense command by a board of officers convened for that purpose, which analysis is forwarded with the reports of all practices for that coast defense command.

Owing to the great cost of the material target and to the fact that in many cases it was impossible to determine the number of hits made thereon, and also because of the fact that it is a poor target for night practice, its use has been discontinued. The accuracy of fire is fully established by photographic observation methods.

Fire and battle command practice for 1912 provided good training at large posts for the field officers in the tactical employment of their commands, but the practice required that several targets be towed separately in different parts of the water area, and since this condition could be had only at a few posts it was thought best to discontinue that form of practice for 1913. The tactical training of field officers in their fire-action duties can be satisfactorily had in subcaliber practice, using small targets towed in the water area by the boats and launches which form the normal equipment of the coast defenses. Fire and battle commands will, however, be rated on the results of the service practice of the battery units composing these commands. A pennant has been provided for each fire and battle command attaining the highest rating in its class.

In the effort to approach service conditions one day practice and one night practice were prescribed wherever conditions of safety permitted night practice. A 10-day period was set aside for target practice, during which period all companies were camped in the vicinity of their respective batteries. Neither the date of the beginning of this 10-day period nor the time of firing for any particular battery was disclosed in advance.

The results of practice with rapid-fire batteries have not been satisfactory. Modifications have been introduced, involving better range finding methods, which it is hoped will reveal marked improvement during the current target year.

Special firing with mortars has demonstrated the fact that a director of fire several miles from a battery can so direct and control artillery fire as to obtain very accurate results. This fact opens up a new field in the application of such fire to cover remote water areas and the landward approaches to coast forts.

The firing of a limited number of armor-piercing and deck-piercing projectiles with high explosive charges has been recently authorized as part of our target practice scheme.

Mine work.—Action has been taken looking to the correction of a tendency of companies assigned to mines to give undue attention to the gun feature of their instruction at the expense of the mine feature. As a consequence of this tendency, certain mine companies have fallen short of a proper standard of mine efficiency. It may be said, in general, that mine companies are not as skillful in handling boats, tackle, and mine matériel as they should be. This tendency has been increased by a failure on the part of some coast defense commanders to allot sufficient time to the water duties of mine companies. An attempt to remedy this will be made in the next annual instruction order.

Infantry exercises.—The Infantry field exercises, as conducted in 1912, were instructive and highly beneficial. The officers detailed from the mobile army as instructors rendered valuable service, for which it is desired to express the fullest appreciation.

Militia exercises.—During the fiscal year 1912–13, Militia Coast Artillery exercises were held in the following-named coast defenses for periods as shown:

Portland	July 18–27, 1912.
Portsmouth	Sept. 6–13, 1912.
Boston	July 7–Aug. 8, 1912.
Narragansett Bay	July 8–28, 1912.
Long Island Sound (Connecticut Militia)	June 10–28, 1913.
New London (New York Militia)	July 6–Aug. 17, 1912.
Baltimore	July 14–28, 1912.
Cape Fear	Aug. 5–16, 1912.
Charleston	July 3–17, 1912.
Galveston	July 6–15, 1912.
San Diego	Aug. 4–18, 1912.
Columbia	Aug. 20–29, 1912.
Puget Sound	July 10–19, 1912.

COAST ARTILLERY SCHOOL.

Both the officers' and enlisted men's departments of this school continue to meet the needs of the service in a very satisfactory manner.

Academic year.—Hitherto the academic year at this school has extended from September 1 to June 30; commencing with January, 1913, the academic year will extend from January 3 to November 30 for both officers' and enlisted men's divisions. This change avoids the interruption of target practice and other outdoor work that the old period entailed.

Officers' division.—On account of the changes brought about by the legislation which requires all captains and lieutenants to spend two out of each six years on duty with a company, there is no advanced class at the school for the present school year.

The regular class was increased from 30 to 40 officers in order that full advantage might be taken of the school equipment and facilities. The 40 officers consist of 5 captains, 32 first lieutenants, 1 captain of the California National Guard, 1 officer of the Chilean Navy and 1 of the Chilean Coast Artillery.

During the year one instructor from the school, a graduate of the advanced course for 1912, was detailed to take a special course at the Massachusetts Institute of Technology. The technical instruction received by officers detailed to this institute proves of great value to the Coast Artillery.

It is recommended that two officers be kept assigned to advanced work for periods of one year at the Massachusetts Institute of Technology, or other technical schools of like high standard.

Valuable experimental work has been continued during the year in the Department of Engineering and Mine Defense on searchlights and searchlight carbons, resulting in the development of improvements for lights and increased efficiency in carbons.

A Coast Artillery war game was developed by the Director of the Department of Artillery and Mine Defense, Maj. William Chamberlaine, Coast Artillery Corps. This game enables officers of the Coast Artillery Corps to become familiar with the various phases which may arise during an attack on a fortified harbor, trains them to estimate the various situations quickly, and to give promptly the necessary commands or instructions. It consists of a relief map, on large scale, of the land and water areas adjacent to the fortified harbor under consideration. Small models are used to represent batteries, position finding stations, searchlights, power plants, and other accessories. Wooden models of warships are made in sufficient detail to make distinguishable the general characteristics of the vessels which they represent. Officers playing the game use field glasses. The models are made to scale, and the view of the whole water area as seen by an officer through a pair of field glasses is similar to the view he would obtain under natural conditions. The game is so valuable in training Coast Artillery officers that it should be installed in every coast defense command. It is urgently requested that a small appropriation be made for this purpose.

Enlisted Men's Division.—During the past year there have been no classes graduated in the artillery, electrical, and mechanical courses of the Enlisted Men's Division, owing to the change in the commencement of the school year. Two classes have graduated during the year in the radio-telegraphy courses, the first consisting of 7 men, the second of 14 men.

Forty-eight enlisted men were detailed to take the courses this year. In addition to this, another radio class consisting of 18 enlisted men commenced work June 16.

Coast Artillery Board.—During the past year the Coast Artillery Board has continued its work of conducting practical experiments and tests looking to the improvement of artillery matériel and methods, of investigating and reporting on such additional matters as do not require experiment or test as may have been referred to it, and of making ballistic and other computations demanded by our system of firing guns and mortars. In this way this board has been of great assistance to the office of the Chief of Coast Artillery.

E. M. Weaver,
Brigadier General, Chief of Coast Artillery.

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